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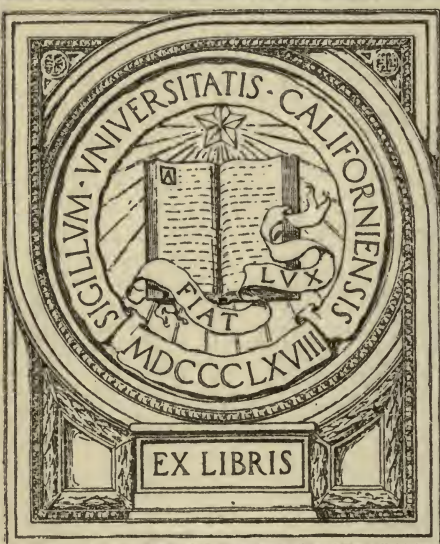
REPORT
OF
Illinois
Pension Laws
Commission



1916

[Printed by authority of the State of Illinois.]

GIFT OF
Dr. H.P. Bates



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REPORT

OF

Illinois Pension Laws Commission

PART I. Investigations With Certain Comparative Studies

PART II. Underlying Principles and Specific Recommendations for a Revised Pension Plan



PART I.

[Printed by authority of the State of Illinois.]



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ACT PROVIDING FOR INVESTIGATION OF THE PENSION LAWS OF ILLINOIS.

The following act was passed by the Forty-ninth General Assembly of the State of Illinois, in its second special session, and approved by the Governor on January 24, 1916:

AN ACT providing for the creation of a commission to be known as the Illinois Pension Laws Commission, and defining the powers and duties of such Commission, and repealing an act entitled, "An Act providing for the creation of a commission to be known as the Illinois Pension Laws Commission, and defining the powers and duties of such Commission."

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That there is hereby created a commission to be known as the Illinois Pension Laws Commission, to consist of four members, one of whom shall be a representative of one of the public pension funds of this State heretofore created by law, the other three of whom shall be persons not interested in any of said pension funds and one of whom shall be a person versed in financial affairs, one a person of actuarial experience, and one a person of legal attainments who shall be chairman of the commission, all of whom shall be appointed by the Governor to hold office as members of said commission until the convening of the Fiftieth General Assembly, at which time said commission shall go out of existence.

SEC. 2. It shall be the duty of said commission to investigate the operation of all pension laws heretofore enacted in this State; to gather together all available information as to the present and probable future cost of maintaining the funds created by said laws and to collect all available information in regard to the operation of similar laws in other states and countries. The commission shall report the results of its investigations, together with any recommendations it may see fit to make, to the Governor not later than December 20, 1916, for transmission to the Fiftieth General Assembly.

SEC. 3. The Commission shall have power to call upon the Insurance Department and other departments of this State for such assistance as it may require, and to employ one or more actuaries, a clerk, a stenographer, and such other assistance as it may require. It shall also have power to examine the books of all present public pension funds now existing by law, to compel the production of all books and papers belonging to any of said funds, to administer oaths and to take the testimony of all witnesses necessary for the purposes of this Act.

SEC. 4. The expense of said commission, including a reasonable per diem to the members thereof not to exceed ten dollars per day for time actually spent in such investigation, shall be paid out of funds to be appropriated for that purpose upon vouchers drawn upon the Auditor of Public Accounts, properly itemized and certified to by the chairman of the commission and approved by the Governor.

SEC. 5. That an Act entitled, "An Act providing for the creation of a commission to be known as the Illinois Pension Laws Commission, and defining the powers and duties of such commission," approved December 3, 1915, be and the same is hereby repealed.

SEC. 6. Whereas, an emergency exists, therefore this Act shall be in full force and effect immediately after its passage and approval.

MEMBERS OF THE ILLINOIS PENSION LAWS COMMISSION.

On January 24, 1916, His Excellency, Governor Edward F. Dunne, appointed as members of the Illinois Pension Laws Commission:

JOHN P. DILLON, of the Bureau of Streets, Chicago;

MARCUS JACOBOWSKY, Vice President of the Fort Dearborn National Bank, Chicago;

HENRY L. RIETZ, Professor of Mathematical Statistics of the University of Illinois, Urbana;

and, as chairman of the commission:

GEORGE E. HOOKER, Civic Secretary of the City Club of Chicago, Chicago.

On February 10, 1916, the commission appointed as its secretary and actuary, DONALD F. CAMPBELL,* Professor of Mathematics, Armour Institute of Technology, Chicago.

* Can be addressed, Room 640, 76 West Monroe Street, Chicago, Illinois.

LETTER OF TRANSMITTAL.

To His Excellency, Edward F. Dunne, Governor of the State of Illinois.

The Illinois Pension Laws Commission, authorized by an Act of the Forty-ninth General Assembly, Second Special Session, approved January 24, 1916, to make certain investigations and recommendations concerning the pension laws of Illinois, submits herewith its report, consisting of Part I, Investigations with Certain Comparative Studies, and Part II, Underlying Principles and Specific Recommendations for a Revised Pension Plan.

Respectfully submitted,

GEORGE E. HOOKER, *Chairman.*

JOHN P. DILLON.

MARCUS JACOBOWSKY.

HENRY L. RIETZ.

Chicago, Illinois, December 20, 1916.



CHAPTER I.

INTRODUCTORY.

Part I of this report gives briefly the history of pensions for public employees in other countries, reviews in detail the pension laws of Illinois, recites the terms of the leading pension laws of other states in this country, sets forth the results of a comprehensive actuarial investigation made by the Commission of the five chief public pension funds in Illinois, and gives important statistics concerning the other funds and the extent of possible pension legislation for public service employees in this State.

Part II outlines briefly the scope and main features of the pension problem, states the essential principles and provisions which, in the opinion of the Commission, should constitute a normal or standard pension plan, and makes specific recommendations regarding changes that should be made by the Fiftieth General Assembly in some of the existing pension acts, pending further investigation and study of the pension problem.

PROCEDURE.

The commission held its first meeting on February 1, 1916, at the City Club of Chicago, on which occasion it elected Commissioner Rietz as acting secretary and proceeded to outline the work to be undertaken by it. Between this date and February 5, it held three meetings, and on February 5, an open meeting to which representatives of the 10 public pension funds in Chicago were invited. About 40 persons attended, all these funds being represented.

At the sixth meeting held on February 10, Donald F. Campbell, Professor of Mathematics in Armour Institute of Technology, and an actuary of experience in insurance and pension matters, was appointed by the Commission as its secretary and actuary. On February 21, it engaged offices at 76 West Monroe Street, Chicago.

To the date of this report, the commission has held 38 meetings, of from 3 to 10 hours each in duration. The Commission expects to hold 7 more meetings before its term of office expires, January 3, next. In collating the voluminous information required, the Commission has had in its employ most of the time since its appointment from 5 to 9 persons, besides 4 persons employed in operating the sorting machines for classifying data, and has also engaged the services, for brief periods of time, of 97 people in different parts of the State in collecting information concerning the State Teachers' Pension and Retirement Fund.

DUTIES IMPOSED ON COMMISSION.

The act imposed the following duties on the commission:

1. To investigate the operation of all pension laws heretofore enacted in this State.

2. To gather together all available information as to the present and probable future cost of maintaining the funds created by these laws.

3. To collect all available information in regard to the operation of similar laws in other states and countries.

4. To report the results of its investigations, together with any recommendations it may see fit to make.

1.

PLAN FOLLOWED IN INVESTIGATION OF OPERATION OF PENSION LAWS ENACTED IN THIS STATE.

In pursuance of the duty of investigating the operation of all pension laws heretofore enacted in this State, we engaged Frederick Green, Professor of Law in the University of Illinois, to prepare a tabular digest of pension legislation in this State, and to write a short historical sketch of such legislation. The tabular digest will be found in Appendix A, p. 206, and the historical sketch forms the subject matter of Chapter III, p. 36.

At the same time Commissioner Dillon and Mr. Campbell were entrusted with the duty of preparing a tabular digest, somewhat more detailed in character, of all pension laws in force in Illinois January 1, 1916. This is presented in Appendix B, page 242.

Having determined the scope of pension legislation in this State, we next directed a letter to the mayor of each city, town and village in the State, outside of Chicago, requesting information concerning the existence of pension funds in the corporation under his administration. After considerable correspondence, we were able to elicit replies from all the mayors thus addressed except those of Spring Valley and Mt. Carmel. Considering the population of these two cities, it is doubtful if any pension fund exists in either. Consequently, the information given with regard to the number of funds outside of Chicago, created under the several pension acts in force in this State (p. 168), is believed to be exact.

2.

PLAN FOLLOWED IN COLLECTION OF INFORMATION AS TO THE PRESENT AND PROBABLE FUTURE COST OF MAINTAINING FUNDS.

The determination of the present cost of maintaining a pension fund involves no difficulty when the books are properly kept, as it consists merely in making a transcript of the books as of the date on which the information is sought. The determination of the future cost of maintaining a pension fund, however, is an entirely different and much more intricate problem. For this determination, various rates at which certain events occur at the different ages must be derived, as, for instance, the rates at which persons eligible for service pension accept pensions, the rates of disability retirement on pension, the rates of withdrawal from service without pension, the rates of death while in active service, and the rates of death while on service pension or on disability pension. To determine these rates, information must be collected on all employees under any particular fund over a definite period, showing the number in service at the beginning of the period with ages as of dates of entrance, the number and ages at dates of withdrawal and causes of withdrawal of those not in service

at the end of the period, and the ages of those persisting at the end of the period. Also, over a definite period, the number on pension at the beginning of the period, the number who retire on pension during the period with ages as of the dates of entrance, the number and ages at dates of withdrawal from pension of those who are not on pension at the end of the period, and the number and ages at the end of the period of those on the pension roll at the end of the period. In the cases where pensions are granted to widows and children, data differing from the above only in certain obvious details must be accumulated, and, in addition, tables must be prepared showing the ratios of the number of married men to the men of the whole group at the several ages, the average ages of the wives at the various ages of the husbands, and the ages and number of children in each family.

This brief outline of a part of the problem of determining the future cost under a pension plan is given in order to emphasize the fact that predictions of future costs can be made only when there is a body of employees sufficient to justify an application of the law of averages. Moreover, if future predictions are to be based entirely on the experience of the fund itself, the fund must be in existence for a sufficient length of time to warrant the assumption that the rates of retirement on pension in the past will be those at which such retirements will occur in the future.

Present Costs.

Having determined the number of pension funds in existence in the State, we next endeavored to obtain information regarding the present cost of maintaining these funds. At the same time, in order to show the progress of the funds from year to year, we tried to obtain the desired information by years for a period of 10 years if the fund had been in operation for that length of time, or from date of inception if it had been in operation for a shorter period. Having in mind the extent of our resources, we deemed it advisable to endeavor to obtain this information by correspondence with those in charge of the books of the several funds in those cases where the funds were located outside of Chicago, but in these efforts we were only partially successful. Although a number furnished us with the information sought as it appeared on their books, others gave us only the figures as of January 1, 1916, and failed to reply to any of our requests for further information; while in two instances, figures relating to the same fund furnished from two different sources were entirely unlike. We regret the fact that our investigations in this particular are not as complete as we should like them to be, but we feel that they are as complete as we could make them and, at the same time, give larger funds the consideration their size demanded.

The information with regard to the funds located within the limits of the city of Chicago was collected by our own employees under the supervision of our actuary, and is submitted with full confidence in its exactness.

For results of present yearly costs, and of yearly costs of the past ten years, see Chapter VI.

Future Costs.

In each of three cases—namely, the Policemen's Fund of Chicago, the Firemen's Fund of Chicago, and the Public School Teachers' Fund

of Chicago—the funds were of sufficient size and in existence for a sufficient length of time to warrant our basing our predictions almost entirely on the experiences of the funds themselves. In each of the two others—namely, the funds for municipal Employees of Chicago, and the State Teachers' Pension and Retirement Fund—the body of employees was of sufficient size to warrant our assuming that the law of averages would apply, but in neither case was there any pension experience obtainable from the fund itself, nor were any tables available from the pension experience of like funds in other communities to apply to it; while in the case of the fund last mentioned, there were no means of finding rates of retirement from service without pension and no such tables available. Consequently, in these cases we were driven to make assumptions that certain events would happen and base our calculations on these assumptions.

For an explanation of the methods by which the data for the determination of future cost was collected, and for the actuarial report on such costs, see Chapter V.

It may be stated here that the actual computations involved in Chapter V were made at the University of Illinois under the immediate supervision of Commissioner Rietz, and that in all problems in which a difference of opinion between actuaries could arise, he consulted with Mr. Campbell, so that responsibility for the correctness of the methods employed in the investigations recorded in that chapter rests jointly on these two men.

The next fund to these in point of number of employees involved is the Public School Teachers' Fund of Peoria. In this case, we had in mind making an investigation similar to that made in the case of the State Teachers' Pension and Retirement Fund, and for this purpose addressed a circular letter, with a self-addressed, stamped envelope enclosed, to each public school teacher in Peoria, requesting the required information. Although this was followed later with another letter, repeating the request, so many of the teachers failed to reply that we would not be justified in making an estimate of future cost based on the number who furnished us with the desired data.

In all the other funds in operation in this State, the body of employees involved was in each instance too small to warrant the assumption that the law of averages would apply. Consequently, no determination of future costs was attempted in any such case.

3.

PLAN FOLLOWED IN COLLECTION OF INFORMATION REGARDING THE OPERATION OF PENSION LAWS IN OTHER STATES AND COUNTRIES.

Another duty imposed on the commission was that of collecting information in regard to the operation of pension laws in other states and countries.

In Other States.

The duty of collecting information in regard to the operation of pension laws in other states was entrusted to Mr. Campbell. This

investigation could consist only of the preparation of a list of pension laws in force in other states and a statement of the provisions of such laws. Since this list and a synopsis of the provisions of each law in force in 1913 had been prepared by the Massachusetts Commission on Pensions and published by this commission in 1914, and since copies of their report are available to all who choose to make a study of this phase of the subject, it was deemed advisable not to prepare such a synopsis, which would to a very great extent duplicate their work, but to have their synopsis brought down to date, and, in a survey of the provisions of the laws of this State, draw attention to the corresponding provisions in the laws of other states. This discussion forms the subject matter of Chapter IV.

In Foreign Countries.

The duty of collecting information in regard to the operation of pension laws in other countries was entrusted to Commissioner Rietz. Upon investigation, we found that not all such data could be collected in the time at our disposal; and indeed if it could be, much of it would be of doubtful value because of the insignificance of the funds or the lack of evidence to show that the plans were chosen wisely. We have, therefore, confined this part of our investigation to a study of a few of the more widely known foreign pension systems, including therein those that presented the greatest evidence of having been built upon some scientific basis. This discussion is the subject matter of Chapter II.

4.

PLAN FOLLOWED IN DETERMINING ON RECOMMENDATIONS.

The course pursued by the Commission in dealing with the actuarial and statistical material gathered, with a view to recommendations, has been to take into account, the pension plans now in operation under the existing pension laws in the State; the respects in which these harmonize with or differ from each other; the important provisions in each affecting the sources and amounts of money contributed to the fund and provisions for payments therefrom; the features which appeared to be regarded as of special importance by the beneficiaries under these various plans; and the features which, on the whole, ought to characterize what might be called a type plan for a public pension system. The comparison of the divergent features of the existing plans and of the equally divergent opinions of beneficiaries under them as to essentials, and the effort to weigh the value of these features, have involved the expenditure of a great deal of time on the part of the Commission in discussion of principles, policies and details. The results of these deliberations comprise Part II of the report and consist, first, in the general principles which, in the opinion of the Commission, should be adhered to as far as practicable in a sound pension system, and, second, in the detailed provisions which are deemed by the Commission to be adapted to carry out those principles. The conclusions of the Commission have been reached after conference with the beneficiaries of the more important pension funds and with other persons interested in the subject.

SUMMARY OF FACTS FOUND.

EXISTING PENSION LAWS IN ILLINOIS.

We find that, beginning with the year 1852, Illinois has enacted some 106 original or amending acts for pensions. As a result of this legislation, on January 1, 1916, there were in force, or likely to become in force, 20 such acts. Of these, 19 involve the expenditure of public money, and one is for the purpose of regulating pensions and maintaining funds by assessment in the case of a private concern.

Among them, the acts regulating "mothers' pensions" and "pensions for the blind," though popularly referred to as pension acts, are really not pension acts by their own terms, or, in fact, in the sense that under them payments are made as a reward for service rendered. In one case payment is granted merely as a relief of need with the view that it will be for the public good, and in the other as a part-compensation for a physical affliction.

Of the remainder, the act for the relief of army and navy veterans merely creates machinery for dealing with such individuals different from that designed for other indigent persons; and the Military Code and the Workmen's Compensation Act are designed primarily for the regulation of liability in the event of injury. After due deliberation, we took the view that, for the reasons stated, the five acts just mentioned did not come within the scope of the work outlined for us, and consequently, none of them has been given detailed consideration.

The remaining acts are listed and their principal provisions given in outline in Appendix B.

EXISTING PENSION FUNDS IN ILLINOIS.

Among the acts listed in Appendix B, the fire insurance patrolmen's is a private act. The act of 1915, designed for policemen in the employ of boards of park commissioners, has not yet gone into effect, and the act designed for officers and employees of counties of more than 150,000 inhabitants has been declared invalid. Under the remaining twelve acts, there are in operation 35 funds. The cities in which they are located are listed below in groups according to the act under which the funds are operating:

Act for firemen in cities of more than 5 000 inhabitants:

Chicago.	Rockford.	Elgin.	Oak Park.
Peoria.	Joliet.	Evanston.	Sterling.
East St. Louis.	Decatur.	Moline.	Bloomington.
Springfield.	Aurora.		

Act for policemen in cities of more than 200,000 inhabitants:

Chicago.

Act for policemen in cities of 50,000 or more inhabitants:

Peoria. Springfield.

Act for policemen in cities of not less than 9,000 nor more than 50,000 inhabitants:

Rockford.	Aurora.	Evanston.	Champaign.
Joliet.	Bloomington.	Moline.	Quincy.
Decatur.			

Act of 1913, relating to policemen in employ of boards of park commissioners: South Park, Chicago. West Park, Chicago. Lincoln Park, Chicago.

Act for public school teachers in cities of more than 100,000 inhabitants: Chicago.

Act for employees of boards of education in cities of more than 100,000 inhabitants: Chicago.

Act for employees of public library boards in cities of more than 100,000 inhabitants: Chicago.

Act for employees of houses of correction in cities of more than 150,000 inhabitants: Chicago.

Act for public school teachers in school districts of not less than 10,000 nor more than 100,000 inhabitants: Peoria.

Act for public school teachers in all school districts of the State, except Chicago and Peoria: Springfield.

DETAILS OF PRESENT AND PROBABLE COST OF MAINTAINING THE CHIEF EXISTING PENSION FUNDS IN THIS STATE.

(A) THE POLICE FUND OF CHICAGO.

1. *Number of employees in service, January 1, 1916, and amount contributed by employees to pension during 1915:* On January 1, 1916, there were 4,830 employees contributing to the fund. The contributions received by deductions from salaries amounted, in the year 1915, to \$117,209.35.

2. *Number of pensioners on January 1, 1916, and amount disbursed in pension during 1915:* On January 1, 1916, there were 1,257 pensioners on the rolls. Of these, 601 were men, 656 widows, and 22 families. The amount disbursed in pension during the year 1915, was \$770,365.42.

3. *Would require reserve for employees and pensioners on January 1, 1916, with their dependents, of over \$30,600,000:* If no additions were made to the force—vacancies caused by retirements on pension, deaths, resignations and dismissals not being filled—a sum amounting to \$30,602,879 on hand January 1, 1916, and invested to net 4 per cent compound interest, together with the amount on hand at that date (\$120,847), and, in addition, the contributions of 2 per cent deducted from salaries of employees, would be sufficient to pay pensions provided for by this act as they mature each year.

4. *Future payments to pensioners and employees of January 1, 1916, with their dependents, over \$73,000,000:* The amounts payable in the future to employees and pensioners on the rolls, January 1, 1916, with their dependents—no additions being made to the force—will total \$73,091,631. These payments will be distributed as follows:

To pensioners on the roll, January 1, 1916.....	\$12,035,741
To pensioners from among those in active service, January 1, 1916, and their dependents and the dependents of those on pension on that date.....	61,055,890

Total\$73,091,631

Amount contributed by employees and cash on hand:

Amount contributed by deduction of 2 per cent of salaries	\$ 1,851,066
Cash on hand, January 1, 1916.....	120,847

Total	\$ 1,971,913
Balance to be provided from other sources.....	71,119,718

Total	\$73,091,631
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5. *Amounts and percentages of pension payments among the different classes of pensioners:* Of the total pension payments to pensioners and those in active service, January 1, 1916, with their dependents, the amounts and percentages of total amount, paid to the different classes of pensioners, will be as in the following table:

Class of pensioners.	Amount.	Per cent of \$73,091,631.
Service pensioners	\$29,558,085	40.4
Disability pensioners	933,285	1.3
Widows of Class A.....	2,761,548	3.8
Widows of Class B.....	31,335,157	42.9
Widows of Class C.....	8,020,352	11.0
Children	483,204	.6
Totals	\$73,091,631	100.0

6. *Pension payments to pensioners and employees of January 1, 1916, will extend for a period of 77 years:* If pensions are paid only to those on pension and in active service January 1, 1916, that is, if the pension system should be discontinued so far as those entering service after January 1, 1916, are concerned, there would be pensioners on the rolls for a period of 77 years, or until 1993.

7. *If the force is maintained at its size of January 1, 1916, \$150,000,000 will be required in 77 years:* If a force of 4,830 men is to be maintained, the amounts necessary to pay pensions under the present plan, in addition to the amounts that will be contributed by employees through deductions of 2 per cent of salaries, during the 77 years following January 1, 1916, will be as follows:

Payments to those on pension roll or in active service, January 1, 1916, and their dependents.....	\$73,091,631
Payments to those who enter the service after January 1, 1916, and their dependents when they become pensioned	87,162,306
Total	\$160,253,937
Deductions of 2 per cent from salaries of those:	
In service, January 1, 1916.....	\$ 1,852,071
Entrants after January 1, 1916.....	8,204,863
Total	\$10,056,934
Balance to be provided from other sources.....	\$150,197,003

8. *Annual charge, varying from \$770,365 in 1915 to \$2,209,233 when the system is carrying its ultimate normal load:* After a system becomes such that the number of employees remains constant, new entrants coming in only to fill vacancies caused by withdrawals and deaths, then there will come a time when pension payments will be the same from year to year. When this time comes, the system is said to be carrying its ultimate normal load. In this instance, if the body of employees remains constant at its size on January 1, 1916, of 4,830 men, the system will carry its ultimate normal load 77 years from January 1, 1916, or in the year 1993. It will, however, carry more than its normal load, namely \$2,227,763, in 29 years or in 1945.

9. *When the system is carrying its ultimate normal load, pension requirements will be 34.3 per cent of the pay roll:* If the body of employees remains stationary at 4,830 men, pension payments, when the system is carrying its ultimate normal load, will be \$912,375 to men and \$1,296,858 to women and children. This makes a total of \$2,209,233, which on the basis of present salaries will be 34.3 per cent of the pay roll. At that time the percentages of payments to men, widows and children compared with total pension payments will be, to men, 41.3 per cent, and to widows and children, 58.7 per cent.

(B) THE FIREMEN'S FUND OF CHICAGO.

1. *Number of employees in service January 1, 1916, and amount received for pension purposes during 1915:* On January 1, 1916, there were 1,973 employees contributing to the fund. The receipts from all sources amounted, in the year 1915, to \$226,196.

2. *Number of pensioners on January 1, 1916, and amount disbursed in pension during 1915:* On January 1, 1916, there were 702 pensioners on the rolls. Of these, 247 were men, 291 widows, and 164 children. The amount disbursed in pension during the year 1915 was \$339,911.

3. *Would require reserve for employees and pensioners of January 1, 1916, with their dependents, of over \$14,000,000:* If no additions were made to the force—vacancies caused by retirements on pension, deaths, resignations and dismissals not being filled—a sum amounting to \$13,772,011 on hand January 1, 1916, and invested to net 4 per cent compound interest, together with the amount on hand at that date (\$3,101), and in addition, the contributions of 1 per cent deducted from salaries of employees, would be sufficient to pay pensions provided for by this act as they mature each year.

4. *Future payments to pensioners and employees of January 1, 1916, with their dependents, over \$33,400,000:* The amounts payable in the future to employees and pensioners on the rolls, January 1, 1916, with their dependents—no additions being made to the department—will total \$33,416,548. These payments will be distributed as follows:

To pensioners on the roll, January 1, 1916.....	\$ 5,427,268
To pensioners from among those in active service, January 1, 1916, and their dependents and the dependents of those on pension on that date.....	27,989,280

Total	\$33,416,548
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Amount contributed by employees and cash on hand:

Amount contributed by deduction of 1 per cent of salaries	\$ 494,909
Cash on hand January 1, 1916.....	3,101

Total	\$ 498,010
Balance to be provided from other sources.....	32,918,538

Total	\$33,416,548
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5. *Amounts and percentages of pension payments among the different classes of pensioners:* Of the total pension payments to pensioners and those in active service January 1, 1916, with their dependents, the amounts and percentages of total amount, paid to the different classes of pensioners, will be as in the following table:

Class of pensioners.	Amount.	Per cent of \$33,416,548.
Service pensioners	\$14,825,010	44.3
Disability pensioners	2,055,511	6.2
Widows of Class A.....	2,976,168	8.9
Widows of Class B.....	9,679,437	29.0
Widows of Class C.....	3,217,801	9.6
Children	662,621	2.0
	<hr/> \$33,416,548	<hr/> 100.0

6. *Pension payments to pensioners and employees of January 1, 1916, will extend for a period of 81 years:* If pensions are paid only to those on pension and in active service, January 1, 1916, that is, if the pension system should be discontinued so far as those entering service after January 1, 1916, are concerned, there would be pensioners on the rolls for a period of 81 years, or until 1997.

7. *If the force is maintained at its size as of January 1, 1916, \$79,709,427 will be required in 81 years:* If a force of 1,973 men is to be maintained, the amounts necessary to pay pensions under the present plan, in addition to the amounts that will be contributed by employees through deductions of 1 per cent of salaries, during the 81 years following January 1, 1916, will be as follows:

Payments to those on pension roll or in active service, January 1, 1916, and their dependents.....	\$33,416,548
Payments to those who enter the service after January 1, 1916, and their dependents when they become pensioned.	46,293,884

Total	\$79,710,432
Deductions of 1 per cent from salaries of:	

Those in service January 1, 1916.....	\$ 494,909
Entrants after January 1, 1916.....	1,947,932

Total	\$2,442,841
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Balance	\$77,267,591
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8. *Annual charge varying from \$339,911 in 1915 to \$1,071,875 when the system is carrying its ultimate normal load:* After a system becomes such that the number of employees remains constant, new entrants coming in only to fill vacancies caused by withdrawals and deaths, then there will come a time when pension payments will be the same from year to year. When this time comes, the system is said to be carrying its ultimate normal load. In this instance, if the body of employees remains constant at its size on January 1, 1916, of 1,973 men, the system will carry its ultimate normal load 81 years from January 1, 1916, or in the year 1997. It will, however, carry practically its normal load, namely \$1,071,795, in 30 years or in 1946.

9. *When the system is carrying its ultimate normal load, pension requirements will be 36.6 per cent of the pay roll:* If the body of employees remains stationary at 1,973 men, pension payments, when the system is carrying its ultimate normal load, will be \$512,960 to men, \$531,862 to widows and \$27,052 to children. This makes a total of \$1,071,874, which on the basis of present salaries will be 36.6 per cent of the pay roll. At that time the percentages of payments to men, to widows and to children compared with total pension payments will be, to men, 47.9 per cent; to widows, 49.6 per cent; and to children, 2.5 per cent.

(C) THE TEACHERS' FUND OF CHICAGO.

1. *Number of employees in service January 1, 1916, and amount contributed by employees to pension during 1915:* On January 1, 1916, there were 7,754 teachers contributing to the fund, of whom 7,010 were females and 744, males. The contributions received by deductions from salaries amounted, in the year 1915, to \$129,875.55.

2. *Number of pensioners on January 1, 1916, and amount disbursed in pension during 1915:* On January 1, 1916, there were 544 pensioners, of whom 521 were females and 23, males. The amount disbursed in pension during the year 1915 was \$191,716.91.

3. *Would require reserve for employees and pensioners of January 1, 1916, of over \$5,600,000:* If no additions were made to the force—vacancies caused by retirements on pension, deaths, resignations and dismissals not being filled—a sum amounting to \$5,601,199 on hand January 1, 1916, and invested to net 4 per cent compound interest, together with the amount on hand on that date (\$1,030,572), and, in addition, the contributions on the present basis from salaries of teachers and contributions of equal amounts from the city would be sufficient to pay pensions provided for by this act as they mature each year.

4. *Future payments to pensioners and employees of January 1, 1916, over \$27,900,000:* The amounts payable in the future to employees and pensioners on the rolls, January 1, 1916—no additions being made to the staff—will total \$27,925,940. These payments will be distributed as follows:

To pensioners on the roll, January 1, 1916.....	\$ 3,233,946
To pensioners from among those in active service, January 1, 1916.....	24,683,994
Refunds	8,000

Total	\$27,925,940
Amount contributed by teachers and city, and cash on hand:	
Amount contributed by teachers.....	\$3,377,370
Amount contributed by city on present basis.....	3,377,370
Cash on hand, January 1, 1916.....	1,030,572
Total	\$7,785,312

5. *Amounts and percentages of pension payments among the different classes of pensioners:* Of the total pension payments to pensioners and those in active service, January 1, 1916, the amounts and percentages to total amount, paid to the different classes of pensioners, will be as in the following table:

Class of pensioners.	Amount.	Per cent of \$27,917,940.
Service pensioners.....	\$26,626,661	95.4
Disability pensioners.....	1,291,279	4.6
Totals	\$27,917,940	100.0

6. *Pension payments to pensioners and employees of January 1, 1916, will extend for a period of 81 years:* If pensions are paid only to those on pension and in service, January 1, 1916, that is, if the pension system should be discontinued so far as those entering service after January 1, 1916, are concerned, there would be pensioners on the rolls for a period of 81 years, or until 1997.

7. *If the staff is maintained at its size as of January 1, 1916, \$85,184,317 will be required in 81 years:* If a staff of 7,754 teachers is to be maintained, the amounts necessary to pay pensions under the present plan, in addition to the amounts that will be contributed by teachers through deductions from salaries on the present basis, and equal amounts from the city, during the years following January 1, 1916, will be as follows:

Payments to those on pension roll or in active service, January 1, 1916.....	\$27,917,940
Payments to those who enter the service after January 1, 1916.....	57,257,241
Total	\$85,175,181
Deductions from salaries:	
Those in active service, January 1, 1916.....	\$ 3,377,370
Entrants after January 1, 1916.....	13,079,042

Total	\$16,456,412
Balance	\$68,718,769

8. *Annual charge varying from \$191,717 in 1915 to \$758,712 when the system is carrying its ultimate normal load:* After the system

becomes such that the number of employees remains constant, new entrants coming in only to fill vacancies caused by withdrawals and deaths, then there will come a time when pension payments will be the same from year to year. When this time comes, the system is said to be carrying its ultimate normal load. In this instance, if the staff remains constant at its size on January 1, 1916, of 7,754 teachers, the system will carry its ultimate normal load 81 years from January 1, 1916, or in the year 1997. It will, however, carry more than its ultimate normal load, namely \$768,074, in 24 years or in 1940.

9. *When the system is carrying its ultimate normal load, pension requirements will be 7.06 per cent of the pay roll:* If the body of teachers remains stationary at the number of 7,754, pension payments, when the system is carrying its ultimate normal load, will be \$758,711. On the basis of present salaries, this will be 7.06 per cent of the pay roll.

(D) THE MUNICIPAL EMPLOYEES' FUND OF CHICAGO.

1. *Number of employees in service January 1, 1916, and amount contributed by employees to pension during 1915:* On January 1, 1916, there were 5,604 employees contributing to the fund. The contributions received by deductions from salaries amounted, in the year 1915, to \$134,127.22.

2. *No pensioners during 1915:* The act under which this fund is operated prescribed an accumulation period of 5 years from July 1, 1911, before pensions would be paid. This period did not expire until July 1, 1916, and consequently, there were no disbursements in pension during 1915.

3. *Would require reserve for employees in service, January 1, 1916, of perhaps in the neighborhood of \$7,000,000:* Of the assumptions made as to the ages at which employees would accept pension from this fund, the one assuming age 60 as the age of retirement on pension would probably most nearly reflect actual future conditions. On this assumption, if no additions were made to the service—vacancies caused by retirements on pension, deaths, resignations and dismissals not being filled—a sum amounting to \$7,005,355, on hand January 1, 1916, and invested to net 4 per cent compound interest, together with the amount on hand on that date (\$525,681.86), and, in addition, the contributions of \$24 per year deducted from salaries of employees, would be sufficient to pay pensions provided for by this act as they mature each year.

(E) THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND.

1. *Number of public school teachers in service January 1, 1916, and receipts of the fund during the year 1915:* As nearly as we can estimate, there were in round numbers 26,000 public school teachers in the State, outside of the cities of Chicago and Peoria, on January 1, 1916. The amount received by the fund during the year 1915 was \$50,144.97.

2. *No pensioners during 1915:* No pension payments were made in this fund before January 1, 1916, excepting small amounts in the cases of funds absorbed by this fund.

3. *Number of pensioners September 30, 1916, and amount disbursed in pension from January 1, 1916, to September 30, 1916:* On September 30, there were 339 pensioners on the rolls. The amount disbursed in pension during the year 1916 up to September 30 was \$26,294.59.

4. *Annual charge when the system is carrying its ultimate normal load:* While there is considerable variation in the results according to the assumptions made, it seems fairly safe to say that the ultimate pension payments under the present system will amount to between 7 and 12 per cent of the annual salary payments.

EXTENT OF PRESENT AND POSSIBLE FUTURE PENSION LEGISLATION FOR PUBLIC SERVICE EMPLOYEES IN ILLINOIS.

We find that on January 1, 1916, there were in Illinois 77,791 public service employees. Of these, 30,550 were under civil service, and 47,241, including 34,191 teachers, not under civil service. Of the 77,791 public service employees, 55,350 were under pension legislation and 22,441 were not under pension legislation. Of the 22,441 not under pension legislation, 9,906 were under civil service. Those consist of: State employees, 5,509; employees other than policemen in the park systems in Chicago, 2,790; county employees, 1,248; and employees in Springfield and Evanston other than policemen and firemen, 359.

For further particulars, see Chapter VII.

CHAPTER II.

THE OPERATION OF PENSION LAWS IN FOREIGN COUNTRIES.

PURPOSE OF THE CHAPTER.

The Illinois Pension Laws Commission is charged not only with the duty of investigating the operation of pension laws in Illinois, but also with that of collecting available information on the operation of similar laws in other states and countries. It is the purpose of the present chapter to give a brief survey of the pension experiences of certain foreign countries, with special reference to such matters as may throw light on the pension situation in Illinois.

COMPARISON OF PENSION CONDITIONS IN THE UNITED STATES AND EUROPE.

In many foreign countries, some more or less scientific form of pension or retiring allowance is provided for public employees in all cases where the tenure of office is practically permanent. We note a decided contrast between this condition and that which exists in the United States. Our Federal Government makes no provision for pensioning its civil service employees; and our states provide pensions, in the main, only to certain select groups, such as firemen, policemen, teachers, municipal employees and judges, and have not, in general, any well-considered policy. The contrast is the more striking when we take into account the fact that the United States pays enormous amounts in war pensions in comparison with those paid in any foreign country. The explanation of this attitude of the Federal and State Governments toward the pensioning of public employees is to be found, perhaps, in the facts that our economic interests have been largely agricultural, and that in communities of such a character the doctrine of individualism receives more general support than in communities where other interests predominate.

In Europe the problem of pensions for government employees has received attention for more than one hundred years. During this time, many unsuccessful experiments have been attempted, which we in this country are inclined perhaps unwittingly to repeat. Especially during the later years of this period the problem of pensions for both government and industrial employees has demanded the thought of the greatest statesmen of Europe, as for instance, Bismarck, Gladstone, Lord Morley, Chamberlain, Asquith and Lloyd-George. In the United States, only within very recent years has an attempt been made to study

the pension problem; and even yet, with few exceptions, no legislation has been enacted calculated to place any fund on a sound financial basis.

ORIGIN AND GROWTH OF PENSION SYSTEMS.

It is obvious that a study of the history of former pension experiences, such as those referred to above, is an important preliminary step in the consideration of future pension plans.

Personal pensions are of ancient origin, these having been given by sovereigns for distinguished service to the state under the Roman Empire. On the other hand, pension *systems* are of comparatively recent origin. They are not, however, so recent but that there exists a considerable body of valuable data which throws some light on our pension problems in America. England has had more than a century (beginning in 1810) of illuminating experience with civil service pension systems, which are in many features similar to pension systems created under the laws of Illinois. France had a pension system for municipal employees in Paris at an even earlier date. Some pension plans in Austro-Hungary date back to 1771.

The idea of creating pension systems for government employees probably originated indirectly with the governments themselves. About the beginning of the last century, various countries began to adopt definite pension plans for soldiers. It was a natural step from such pensions to similar provisions for policemen, firemen and other government employees. This class of pension is in the nature of a reward for past services, and is not based necessarily on the need of the individual.

Somewhat later, as the result of the changed social and industrial conditions, caused largely by the use of machinery, industrial pension systems were inaugurated by certain governments. These pensions are in the nature of relief to a class described as the not undeserving poor, and are intended in large measure as a defense for working men against need in old age and invalidity.

METHOD OF PROCEDURE.

Although the two classes of systems afford a fundamental distinction in regard to the basis upon which pensions are paid, still the development of each has had an influence on the other. A discussion of pension systems for government employees would therefore be incomplete without a more or less detailed reference to industrial systems.

In order to present some of the facts in concrete form we shall take up separately some foreign countries whose experiences seem especially valuable, and give brief descriptions of these experiences with such comments and interpretations as seem to have some bearing on the status of pension funds in Illinois. Especial attention and a relatively large amount of space are given to Great Britain and Germany, because it appears that we in America are tending to retrace unconsciously the main features of the experiences of these countries without profiting by their failures.

GREAT BRITAIN.

CIVIL SERVICE PENSIONS.¹

EARLY EXPERIMENTS.

As stated above, the British Government has had more than a century of experience in attempting, by the payment of pensions, to solve the problem of retirement from the civil service. In 1810, under a general act, the government began the payment, out of the revenue of the country, of retiring allowances to civil service employees.

Because the expenditure was increasing rapidly, Parliament provided in 1822 that deductions should be made from salaries of civil service employees receiving more than one hundred pounds (\$486.66) per annum. The law required that half the superannuation allowances granted after that date should be paid out of the funds thus created. Two years later the act was repealed, and the sums contributed up to that time were returned.

From 1824 to 1829 pensions were granted by the State on a liberal basis without deductions from the salaries of the employees.

LAWS IN FORCE FROM 1829 TO 1857.

From 1829 to 1857, a contributory system was in force for all who entered the civil service subsequent to August 4, 1829. The deductions from salary were $2\frac{1}{2}$ per cent from salaries not exceeding one hundred pounds (\$486.66) per annum, and 5 per cent from salaries exceeding that amount. This act contained no provision that the amounts thus collected should be funded and accumulated at interest. The contributions were to be turned into the general exchequer, and no provision was made for determining whether or not they were adequate to supply the pensions promised.

A general feeling of dissatisfaction with the contributory system developed among the employees. They believed, in the first place, that the contributions were more than adequate to provide the pensions promised. More particularly, however, their antagonism to the system was aroused by the lack of a provision for the refund of contributions in case of withdrawal from the service before the conditions for receiving a pension were fulfilled. In this latter connection, the distinguished Sir John Herschel, after leaving the public service, expressed himself in regard to the injustice of offering no refunds in the following manner: "The only mode consistent with justice in dealing with such portion of a man's salary as may be withheld from him is to regard it as held in trust, and managed for his absolute benefit, to be either handed over to him with accumulations at the termination of his service or paid over to his estate in the case of death."

The discontent with the conditions became so intense that in 1846 the employees formed an association for the purpose of bringing their grievances before Parliament. This association worked on various plans for ten years, and presented its claims before a select committee

¹For a source of more complete information on the experience of Great Britain, see Report of Herbert D. Brown, U. S. Sen. Doc. No. 290, 61st Congress, second session.

of the House of Commons in 1856. Two actuaries were appointed to investigate the question as to whether the deductions from salary were more than adequate to pay the pensions. Contrary to expectations, the actuaries found that the contributions were inadequate and that if the system had depended upon contributions only it would have been hopelessly insolvent. The provision requiring deductions from salaries was repealed in 1857, and an act was passed in 1859 which established a system of noncontributory pensions.

LAW IN FORCE FROM 1859 TO 1909.

In this act of 1859 the amount of the pension was fixed at one-sixtieth of the salary for each year of service, with a maximum of two-thirds of the average salary. Retirement on pensions was permitted at age 60, or in case of disability after ten years of service; but no power was given the state to compel retirement at any age. In its general and most important features the scheme inaugurated in 1859 remained unaltered until 1909. During this interval, however, some changes in detail were made; thus, under an act of 1887, pensions were given to widows and children of public servants killed in the performance of duty.

This system of noncontributory pensions created by the act of 1859 was not satisfactory to the employees. After the system was in force for some time, the view came to be held that the pension was taken into account in fixing salaries; in other words, that the employees, because of their pension prospects, were being paid less than they would otherwise receive. A committee consisting of 70,000 of the total 100,000 employees, which took the name "Deferred Pay Committee," pressed the claims of employees so vigorously that the Courtney Commission was appointed in 1902 to investigate their grievances.

THE COURTNEY COMMISSION—1902.

This commission held rather arbitrarily that no more than was necessary to pay pensions was being withheld. The contention that salaries are lower for those employees who come under the pension act than for similar employees outside a pension act was practically admitted. The commission recommended that life insurance of a certain form be granted in lieu of part of the pension. This recommendation was submitted to popular vote of the employees, with the result that 80 per cent of the service voted for the change.

THE PRESENT LAW—ACT OF 1909.

In accord with this recommendation a law was passed in 1909 reducing the amount of pension by one-quarter, and substituting, in place of this part of the pension, benefits in the form of insurance against death and cash payments in case of withdrawals from the service before receiving a pension.

The reduced pension under this law is thus one-eightieth of the average annual salary for each year of service, instead of one-sixtieth as had been the case since 1859. In addition, the treasury is authorized

to give a retiring employee a lump sum of one-thirtieth of the average annual salary multiplied by the number of years of service, provided the additional allowance shall not exceed one and one-half times the average annual salary. Continuance in active service after age 65 is discouraged by reducing the additional allowance in case of service after this age.

PENSIONS AND GRATUITIES TO LONDON METROPOLITAN POLICE.

The pension system for London police contains a few features to which special attention should be directed. A distinction is made in the London Police Act of 1890 between pensions and gratuities. When the retiring allowance is given automatically, it is called a pension. When an allowance is obtained by special decision of the Police Authority which grants pensions, it is called a gratuity. Thus, if at any time during service, a policeman is incapacitated for the performance of his duty by infirmity of mind or body occasioned by an injury received, without his own fault, in the execution of his duty, he receives a pension. If the incapacity is not directly the result of an injury thus received, the Police Authority may, if it sees fit, grant him a gratuity. Similarly, if a policeman dies while in the police force from the effect of an injury received, without his own fault, in the execution of his duty, a pension is granted to his widow, and allowances are given to his children. If a policeman dies while in the police force from any cause, the Police Authority may, if it sees fit, grant gratuities to his widow and children, or any of them.

The London police system differs from the general civil service system in that final salary, with a qualification, instead of average salary, is the basis for determining the amount of the pension. The qualification applies where a policeman has been promoted within three years previous to retirement. In this case, the pension is a percentage of his average annual pay for the three years, and the percentage depends on the number of years of service just as in the general civil service system explained above.

A PENSION AS DEFERRED PAY.

In the general act of 1909 it is recognized that the value of a pension is taken into account in fixing salaries, and that the pension is a form of deferred pay.¹ In brief, after a hundred years of experience with civil service pensions in England, the pensions are regarded very generally as deferred pay. Thus an employee acquires an equity in the nature of a pension expectation; and to leave the service without a consideration for this equity is analogous to lapsing life insurance without a surrender value. Moreover, such pensions as do not offer some settlement of the equity involved in pensions in cases of death and withdrawal are likely, in time, to interfere seriously with the mobility of labor and with competition among employers. It was in

¹ The Courtney Commission, after careful investigation, held that a pension is deferred pay, but with a qualification that is of interest. The commission took the view that a pension is remuneration for services, but that it is also, in part at least, a reward for continuity of service contingent on the continuity being maintained throughout a definite period, and not accruing from year to year.

the law of 1909 that the principle was recognized that even with a noncontributory system the employee who withdraws from the service should receive certain benefits. He should receive these because he worked for lower wages or salary than he would have done if no pension system had existed. In other words, even a noncontributory system of pensions has in England become virtually contributory, because wages and salaries are held at a lower level on account of the pension prospects. This appears to be the view of the majority of government employees in England, as shown by their votes, after an experience since 1859 with noncontributory pensions.

CONTRIBUTORY AND NONCONTRIBUTORY PENSION PLANS IN GREAT BRITAIN.

To review briefly the experience of Great Britain, we note the following periods with respect to contributory and noncontributory systems:

1810 to 1822, totally noncontributory pension plan.

1822 to 1824, half contributory pension plan.

1824 to 1829, totally noncontributory pension plan.

1829 to 1857, totally contributory pension plan.

1859 to present date, totally noncontributory pension plan, with reduced pensions since 1909 and substitution of some withdrawal benefits and insurance.

ON THE COST OF PENSIONS IN GREAT BRITAIN AS A PERCENTAGE OF CORRESPONDING SALARIES FOR ACTIVE STAFF.

The ratio of pension payments to salary payments depends on several factors. When a department is relatively new, or has experienced a period of rapid growth within the past 20 or 25 years, it is likely to have a relatively large number of young men on the salary roll. On the other hand, if a department is decreasing in number by failing to fill vacancies, it will probably have a relatively large number of old men. It was reported before the Courtney Commission in 1902 that the ratio of pension payments to salary payments was only about 6 per cent in the post office department, whereas in the customs and treasury departments the ratio was about 30 per cent. The ratio of pension payments to salary payments for the entire service was between 16 and 17 per cent. As an additional illustration, we note that in 1915, the London metropolitan police had a pay roll amounting to \$10,060,914 for salaries and \$2,946,919 for the payment of pensions, from which we find that the current cost of pensions is over 29 per cent of salaries. The post office department in 1902 was clearly not carrying its ultimate normal load,* whereas the customs and treasury departments probably were carrying theirs.

VIEWS HELD IN THE LIGHT OF THE EXPERIENCE OF GREAT BRITAIN.

Although one would hardly expect complete agreement on many matters concerning pensions, it seems fair to say that the following

* When there is such a distribution of ages as will arise if a department is simply maintained at a fixed size by the addition of young men to replace withdrawals and deaths, we say that the system carries its ultimate normal load.

views are pretty generally held among employees and others familiar with the experience of Great Britain:

1. The pensions are regarded as deferred pay. The fact that 70,000 of the total of 100,000 employees belonged to the Deferred Pay Committee shows very clearly the views of employees. The government, moreover, supported the contention of the employees in this matter when it provided a form of refund through the law of 1909.

2. The noncontributory pension tends to lower the level of wages or salaries of the participants.

3. The civil service employee of Great Britain feels that he acquires an equity in a pension by working for a lower salary than that which would be paid him if no pension system existed, and that some benefit should be paid when the employee leaves the service by death or retirement.

COMPARISON WITH PENSIONS UNDER ILLINOIS LAW.

1. Since each of our Illinois pension systems for public employees is at least slightly contributory, we may say that the contributory principle is to some extent recognized. Furthermore, if it should occur that the contributions will carry but a small per cent of the ultimate normal load, there is little doubt that, in time, the pension will be taken into account in fixing salaries and wages in so far as the pensions are not directly contributory.

2. The amount of the benefit under the civil service pensions of Great Britain is graded according to length of service, with a maximum based on 40 years of service, whereas our pensions in Illinois do not vary with length of service.

3. The pensions of Great Britain for government employees and for teachers have, in general, a common basis of calculation; namely, a percentage of average salary¹ throughout the entire period of service. On the contrary, the bases of calculation in our principal funds vary widely. For instance, the firemen's pension is on the basis of half the final salary, whereas the teachers' fund and municipal employees' funds provide uniform amounts without reference to the salary. The British standard is very generally in use throughout Europe, and appears to be a more satisfactory basis than final salary, as final salary is capable of easy manipulation.

4. Retirement under the British law is permitted at age 60, and some pressure is brought to induce retirement at age 65 by reducing the benefits to be received after that age. The retirements under the Illinois law are, in general, at younger ages; and for policemen and firemen no age qualification is required.

5. The cost of the British system for some departments has much more nearly approached the ultimate normal load than has the current cost of systems in force in Illinois, on account of the longer time the British system has been in force. The current cost in some departments of the English government service is over 30 per cent of the salary payments.

¹ See page 23 for modifications in the case of London police.

TEACHERS' PENSIONS IN GREAT BRITAIN.¹

EARLY PENSION PLANS.

Pensions for certain teachers have been paid in Great Britain since 1846. In 1862, action was taken which made it impossible to add to the existing pension roll, but this action was without prejudice to the validity of pensions already granted. In 1875, provision was made to grant further pensions, but with decided limitations as to the number of pensions to be allowed in England and Scotland together. These pensions were intended to facilitate the appointment of competent successors in places of meritorious but incapacitated teachers. The pensions were administered through Committees of the Council on Education. That the plans were inadequate to satisfy anything except the most pressing needs, is shown by the fact that in 1900 the rules provided that the maximum number and value of pensions receivable at one time, in England and Scotland together, and including pensions then current, should be as follows:

73 pensions of 30 pounds each.....	2,190 pounds
394 pensions of 25 pounds each.....	9,850 pounds
563 pensions of 20 pounds each.....	11,260 pounds
Donations and special gratuities.....	440 pounds
	<hr/>
	23,740 pounds

These pensions, provided by a sort of secondary legislation of the Committee of Council, represented about all that existed in the line of pension systems for public school teachers until the legislation of 1898. Since the law of 1898 became operative, the amount expended for the pensions administered by the Committee of Council has gradually decreased. In fact, teachers who accept the act of 1898 are debarred from the earlier form of pensions, unless they are unable to qualify under the new regime after such acceptance.

THE ELEMENTARY SCHOOL TEACHERS (SUPERANNUATION) ACT OF 1898.

The Elementary School Teachers (Superannuation) Act of 1898, was the law through which Parliament for the first time established state pensions for teachers. The age of retirement was 65 years. The male teacher was to contribute three pounds (\$14.60) and the female two pounds (\$9.73), to be used to purchase a deferred annuity beginning at the age of 65. The government was to provide from public funds an allowance of ten shillings (\$2.43) for each complete year of service.

THE AMENDMENT OF 1912.

The law was amended in 1912, and a distinct law was then enacted for Scotland. The amendatory act fixed the rates of contribution at three pounds, twelve shillings (\$17.52) and two pounds, eight shillings (\$11.68) per year for men and women respectively, and increased the government allowance from ten shillings (\$2.43) to

¹ See Sies, R. W., *Teachers' Pension Systems in Great Britain*, U. S. Bureau of Education, Bulletin, No. 34, 1913.

one pound (\$4.86) for each complete year of service. Under the present provisions a man with 40 years of service at age 65 receives a pension of seventy-eight pounds (\$379.59), of which thirty-eight pounds, (\$184.93) are provided by his contribution and forty pounds (\$194.66) from public funds. A woman, aged 65, with 40 years of service, receives fifty-nine pounds (\$287.12). Provision is made for the actuarial examination of the funds at stated times to determine whether the experience is in accord with expectations.

SYSTEM IN FORCE IN SCOTLAND AFTER 1912.

In 1912, when the Superannuation Act of 1898 ceased to apply to Scotland, a system that merits careful study was inaugurated in that country under competent actuarial advice: School boards are required to pay certain amounts into a State Teachers' Superannuation Fund. Certain amounts are also to be deducted from the salaries of teachers and paid into this fund. The conditions for retirement are at least 10 years of service and 60 years of age, or total and permanent disability not caused by the teacher's own misconduct. In case of teachers entering the service after the law was in force, the amount of the pension is one-sixtieth of the average annual salary throughout the period of service multiplied by the number of years of service, provided the pension may not exceed two-thirds of such average salary. Provision is made for the return of contributions on withdrawal from service or in case of death. At the end of every five years from the beginning of the scheme, an investigation and valuation of the fund must be made by an actuary appointed by the department.

OLD AGE PENSION SYSTEM OF GREAT BRITAIN AND IRELAND.

CONDITIONS OF PAYMENT OF OLD AGE PENSIONS.

These pensions are paid under a law entitled the "Old Age Pension Act, 1908," with certain amendments which do not affect the principles of the act but merely change certain regulations. The scheme went into effect January 1, 1909. Any person who fulfills the following conditions is entitled to a pension:

1. Age 70.
2. A British subject for at least 20 years, during twelve of which he held residence in the United Kingdom.
3. Yearly income not greater than thirty-one pounds, ten shillings (\$153).

Persons are disqualified under the following conditions:

1. Habitual failure to work before age 70.
2. Detention in an asylum under the Lunacy Act of 1890.
3. Conviction and imprisonment without the option of a fine—in which case a period of from two to ten years must elapse before a person is qualified.

Until 1911, there was the additional condition that the person to receive the pension should not be in receipt of poor relief. The effect of removing this restriction was to transfer on January 1, 1911, a total of 122,000 regular paupers to the list of old age pensioners.

PENSION RATES.

Pensions are granted at rates shown in the following table:

ANNUAL INCOME.	WEEKLY BENEFIT.
Up to 21 pounds.....(\$102.20)	5 shillings.....(\$1.22)
From 21 pounds to 23:12:6.....(\$114.97)	4 shillings.....(\$0.97)
From 23:12:6 to 26:5.....(\$127.75)	3 shillings.....(\$0.73)
From 26:5 to 28:17:6.....(\$140.50)	2 shillings.....(\$0.49)
From 28:17:6 to 31:10.....(\$153.41)	1 shilling.....(\$0.24)

STATISTICS ON NUMBER OF OLD AGE PENSIONERS AND COST OF OPERATION.

The number of pensioners under England's Old Age Pension Act in 1909 was 647,494; in 1913 the number had increased to 967,921. The first year's figures reported run from April 1, 1909, to March 31, 1910. This is called the fiscal year 1909. On account of the changed social conditions caused by the European war, it is perhaps just as well not to report later figures. The cost of these pensions increased from 8,465,231 pounds in 1909, to 12,130,609 pounds (\$59,033,610) in 1913. The average benefit in 1913 was twelve pounds, ten shillings (\$60.98) per year.

It appears that the number of pensioners in England, Scotland and Wales is between 50 and 55 per cent of the male population over 70 years of age, and between 65 and 75 per cent of the female population of corresponding age. In Ireland the percentage of the population appears to be somewhat higher. One of the most surprising features in this system of pensions is the smallness of the benefit to the individual, but the large number of individuals who are on the pension list.

CRITICISM OF THE SYSTEM.

The National Civic Federation issued a committee report¹ in 1914 containing a statement of the operation of the above-described Old Age Pension Act. It appears that the committee was interested in these pensions from the standpoint of the welfare of the wage earner as well as that of the employer and general public. At least, Mr. J. W. Sullivan, representing wage earners, was chairman of the committee.

This report is decidedly critical toward this pension system, as is shown by the following statements:

"Under the British law an aged person does not have to be destitute or in fact in need of public support to become a pensioner; for he or she may be rightfully dependent upon sufficiently well-to-do relatives. Family life among the working classes, as indeed among all other classes, is more or less communistic. The family, not the individual, becomes the natural social unit. * * * By an understanding between parents and their offspring, the pension may be drawn as drink or pin money. Wages may be, and it is stated often are, reduced by consent just so much as is necessary to bring the employee within the pension law limit. In fact, it is commonly admitted that when the law went into operation the general average wages of laboring men over 70 went down eight shillings a week, so that the full pension could

¹ Report of the Committee on Preliminary Foreign Inquiry, Social Insurance Department, November, 1914.

be drawn. * * * The fundamental objection that this system of relief discourages thrift, and destroys the sense of individual and family responsibility, needs only to be pointed out. The English system prescribes no criterion of merit at all. It seems to be indiscriminate poor relief, pure and simple, merely disguised in name, and in a form peculiarly liable to abuse and fraudulent imposition."

Whether we accept all of this criticism as conclusive, or not, it seems clear that the so-called old age pensions of Great Britain are not paid to individuals as a reward for service to society; and that they are therefore more in the nature of poor relief—so disguised as to remove the stigma that goes with many forms of such relief—than in the nature of a pension. Moreover, it also appears that as a means of relief the system is not effective in distinguishing between the existence and nonexistence of need on the part of the participant.

COMPARISON WITH PENSION LAWS OF ILLINOIS.

In the pension laws of Illinois we find very little that resembles the system of so-called old age pensions of Great Britain; but in connection with the tendency to use the word "pension" for "poor relief," it may be worth while to call attention to the fact that we have in the State of Illinois a law that is sometimes referred to as the Mothers' Pension Act, and another that is commonly known as the Pension Act for the Blind. It appears that the word "pension" does not occur in either of these acts. The former is correctly denominated as "An Act to Provide for the Partial Support of Mothers * * *," and the latter as "An Act for the Relief of the Blind." The payments under these acts are made with a view to the relief of need.

GERMANY.

CIVIL SERVICE PENSIONS.

Public pension systems for the employees of the government of the German Empire, for employees of the Confederate States and for employees of municipalities within the Empire follow the same general lines and differ only in minor particulars. The conditions for the payment of the pensions are nearly uniform. For retirement, an age limit of 65 years or disability is a necessary condition. The pensions paid are graded according to length of service and average amount of salary throughout the period of service. They vary, in general, from 33 $\frac{1}{3}$ per cent to 75 per cent of the average salary. If a pensioner receives pay from holding any other public office, the payment of the pension is suspended in so far as the salary connected with the new office, together with the pension, would exceed the last salary of the employee at the time of retirement.

Although the systems for the different parts of the country do not differ greatly, it may be worth while to characterize briefly the system for officers of the Empire and for those of the leading States.

OFFICERS OF THE EMPIRE.

These pensions are provided for by laws of 1873 and 1907. The following fundamental conditions are prescribed: (1) The employee

must have a life appointment, and the work of the office must be his life work; (2) he must draw a salary out of the budget of the Empire.

The pension may be obtained at age 65 without proof of disability, provided other conditions are satisfied. If, upon reaching that age, an officer does not elect to retire voluntarily, the determination of the question whether he shall be compelled to leave the service against his will, rests with a delegation of a higher court of the Empire. If disability is incurred in consequence of performing the duties of an office before the officer has 10 years of service, the amount of pension is one-third of the average salary. For each additional year after 10 years of service up to 30 there is added one-sixtieth to the one-third, and from 30 years on there is added one-one hundred and twentieth for each year of service.

OFFICERS OF CONFEDERATED STATES—PRUSSIA, BAVARIA, SAXONY, WURTEMBERG, BADEN.

Civil service pensions rest on laws enacted and amended at various times since 1872. Pensions are awarded on grounds of disability after 10 years of service, or on becoming of age 65 with at least 10 years of service. Those who are forced into retirement have recourse to a hearing before the Staatsministerium. The rates of pension are the same as in the Empire. The provisions for civil service pensions apply, in general, to teachers and officers in the secondary and higher schools, but not to university teachers. The latter continue to draw their full salaries, for life even when they are retired from active teaching. This distinction is no doubt conferred with a view to rendering the position of university professor more attractive, and to making the professor fairly free to continue his scientific research even in old age.

OFFICERS OF CITIES.

The city officers, generally speaking, in case of disability receive pensions according to the provisions for State officers. The retirement of city officers is not uniformly at age 65, but is regulated somewhat by ordinances. In general we may say, however, that these pensions do not differ essentially from those for officers of the State.

COMPARISON WITH CONDITIONS IN ENGLAND.

As in England, we find the pensions for government employees on a noncontributory basis. It is admitted, in general, that the salaries are kept lower than those paid for similar work outside the government service. So far as government employees are concerned, there seems to be very little difference in principle between the German and English systems. The German system requires age 65 for service retirement, whereas England permits retirement at 60. Germany, in general, includes teachers in this noncontributory system, whereas in England the system for teachers is distinct and is contributory to the extent of providing about one-half the benefits.

OLD AGE OR INDUSTRIAL PENSIONS IN GERMANY.

In the matter of industrial pensions Germany has been unquestionably the leader of all countries. In this class of pensions her system differs decidedly from that of England. The old age pension system of Germany dates back to the law of 1889; and this law is regarded as one of the pieces of constructive statesmanship of Bismarck. The expense of this system falls jointly on the employers and the employees and the government. According to some authorities, the experience of Germany constitutes the most complete and successful solution of the problem of caring for aged and disabled industrial workers. Although we have no reason to question this statement, when applied to German conditions, it leads to a questionable inference if we conclude that such a system would work well in America. This pension system comes under what is called compulsory old age and permanent disability insurance. Such insurance is compulsory if the income is less than 2,000 marks (\$476). The participants include all laborers, employees in commercial establishments, domestic servants, and certain other employees. The Imperial Government contributes to each pension the sum of 50 marks (\$11.90) from its own funds. It takes care of part of the expenses of administration, and pays part of the contributions while the participant is on military duty. The weekly contributions are uniform for all classes, and are graded according to amount of wages from Pf. 14 (\$.033) to Pf. 36 (\$.086). The age of retirement is 70. The average of the pensions paid is a little over 160 marks, or between \$38 and \$39 per year. The features that probably stand out most conspicuously in this scheme are the smallness of the contributions from individuals and the smallness of the individual benefits.

Although we have no system in America that is closely analogous to these systems of old age pensions, the main features of such schemes are outlined here in order to give as comprehensive a view of the pension situation abroad as is possible in a brief outline, and to correct an impression that those pensions are on what would be regarded as a liberal basis for an individual employee in America.

AUSTRO-HUNGARY.

CIVIL SERVICE PENSIONS.

In Austro-Hungary there is a thoroughly developed system of pensions for government employees, which dates back to 1771. It provides for widows, and orphans when both parents are dead. Unfortunately, there are in reality about forty different pension systems in Austro-Hungary for different classes of civil service employees. In general, the pension for invalidity after 10 years' service varies from 33 to 40 per cent of average salary. This increases with service until the end of 30 to 40 years of service. The widows obtain about one-third of the active pay, and orphans about one-fifteenth each of the active pay.

ENUMERATION OF SYSTEMS, WITH METHODS OF MEETING THE COSTS OF PENSIONS.

The following are the principal systems in force in Austro-Hungary:

1. Systems in which payments are granted by imperial decisions.
2. Systems without contributions from employees.
3. Systems with moderate contributions from employees, but not sufficient in amount to keep the fund actuarially solvent.
4. Systems either with or without contributions from employers where future pension burdens are cared for by creating a reserve in accord with actuarial principles.
5. Systems in which future pension burdens are covered partly by the creation of funds, and the additional cost is paid by the treasury.

Pensions for the bulk of civil service employees are characterized by the following features: Pensions sufficient to give a subsistence are secured by the treasury without contributions from employees, and actuarial principles are introduced to insure proper reserves and benefits for the additional amount of the pensions.

Mr. Blascke, the noted actuary, has expressed the opinion that the pension situation has already probably entered into substantially its constant period. The annual pension payments amount to between 30 and 40 per cent of active salaries.

FRANCE.

SYSTEM OF PENSIONS.

Under the law of April 5, 1910, France has a system of pensions that is in the nature of annuities provided by equal payments from employees and employers into the funds created and to be used in accord with actuarial principles. This pension law applies not only to wage earners of all trades and professions, but also to public employees not entitled to retiring allowances under previous laws and regulations. All wage earners and eligible public employees in the country receiving less than 3,000 francs (\$579) a year are required to become participants. On the lowest scale of contribution a male participant receives at age 65 a pension of \$82.80. He is not, however, limited to the minimum contribution, and the pension may be made whatever he desires or can afford in contributions. The retirement age is age 65.

The most important group exempted from the system inaugurated by the law of 1910 is the one composed of public employees subject to the law of 1853. This group receives annuities paid directly from the public exchequer, but deductions are made from salaries. In general, France makes comparatively large deductions from salaries to provide pensions.

French State Railway employees are retired at the age of 55, which is a low age of retirement in Europe. For covering such pension cost, employees make regular contributions of 5 per cent of their salaries and additional contributions of one-twelfth of a year's salary when newly admitted, and one-twelfth of increases in salary for the year following such increase. The railway administration estimates

that it will contribute the remaining half of the cost of the pensions. It is the tendency in France to compel the purchase of annuities, rather than to offer noncontributory pensions.

NEW ZEALAND.

On account of the fact that New Zealand has been one of the most progressive countries in matters of pension plans and has tried various methods of dealing with the superannuation problem, it seems worth while to include this country in our study of pension experiences.

CIVIL SERVICE PENSIONS.

The plan of granting straight pensions and gratuities out of the treasury was begun in 1858, and continued for thirteen years, when it was abolished chiefly because of the cost of proceeding with the plan. For the next thirteen years, the government merely granted "compensation" (compensation for the loss of office) amounting to one month's salary for each year of service. From 1886 to 1893, 5 per cent was deducted from the salaries of civil service employees to be invested and returned with interest when such employees left the public service. In 1893 there was adopted compulsory insurance through the Government life insurance office. This insurance provided a death benefit in case of death before age 60, and a life annuity if living at that age. Although this method of providing for retirement proved unsatisfactory, no legislation of a general nature was enacted until the law of 1907, although laws for special classes, such as policemen, teachers and government railway employees, were passed within the period.

THE GENERAL LAW OF 1907.

The general law enacted in 1907 applies to all permanent civil service employees not included in police, teachers' and railway funds. All new entrants into the civil service are compelled to join the fund. It is a noteworthy feature that the rate of contribution varies from 5 to 10 per cent of the salary, depending upon the age of the entrant into the service. There is provided a government subsidy of 20,000 pounds (\$97,330) a year, together with such annual amounts as the report of the actuary shows to be necessary to meet the charges on the fund during the ensuing year. Pensions are claimable by men at age 65 or after 40 years of service; by women at age 55 or after 30 years of service. There is no compulsory age of retirement. The amount of the pension is one-sixtieth of the average salary during the last 3 years of service multiplied by the number of years of service, and is limited to two-thirds of the salary. In case of withdrawal, the contributor is entitled to a return of his contributions, but without interest. In case of death, either an annuity of eighteen pounds (\$88) is granted the widow, or the contributions are returned to the estate of the deceased.

It is correct to say that, in general, the plans under the special act for policemen, teachers and railway officers do not differ essentially

from the plan under the general act. It may be noted that pensions for policemen are claimable at age 60 instead of 65, but that 25 years of service is an added requirement. The fund is administered by the Public Service Superannuation Board of ten members, of whom five are appointed by the Governor and five elected by the contributors.

OLD AGE PENSIONS.

In 1898, New Zealand enacted an old age pension act making a person who satisfies the following conditions eligible, provided he is not an Asiatic:

1. Income of less than 50 pounds (\$243.32) per year.
2. Accumulated property of a value less than 260 pounds.
3. Residence in the colony as a citizen for at least 25 years.
4. Age 65 years.

These pensions are on a totally noncontributory basis.

CONCLUSION.

It is an observation worth making that New Zealand has changed from a system of noncontributory pensions for government employees (adopted in 1858) to a system which is almost totally contributory, and that it has at the same time established old age pensions on a non-contributory basis.

GENERAL SUMMARY AND COMPARISONS.

We make the following general observations from the foregoing outline of the operation of pension plans:

METHODS OF MEETING THE COSTS OF PENSIONS.

In Great Britain there exist noncontributory pensions for the bulk of permanent public employees, but teachers have a contributory fund that is kept financially sound by actuarial examination and report at stated intervals. In Germany we find that teachers are, in general, included with civil service employees in the noncontributory system. England has noncontributory general old age pensions, whereas Germany has contributory old age pensions for industrial workers.

In New Zealand we find almost totally contributory pensions for government employees including teachers, and noncontributory general old age pensions. This is exactly the reverse of the practice in Germany. Provision is made by the government subsidy to keep the system of New Zealand actuarially solvent.

We find that France encourages by a sort of compulsion the purchase of annuities, and consistent with this practice we find a system of contributory pensions for public employees.

In Austro-Hungary we find a great variety of pension systems varying from noncontributory systems to those that are totally contributory.

In a general way, it is correct to say that in the practice of foreign countries, we find precedents for a great variety of systems. We find that the systems vary from those operating loosely without much regard for the probable future cost, to those kept actuarially

sound on the theory that a class of persons of given age and service should be accumulating a sufficient fund to pay their own pensions.

AGE OF RETIREMENT.

The age of retirement is generally 65 years, but in some cases is 60 years. For women in New Zealand it is as low as 55. In respect to age, the Illinois law for retirement for service without age specifications permits the retirement of policemen and firemen at much younger ages than we find in any of the foreign countries examined. Even our ages of retirement for teachers at 50, houses of correction employees at 50, municipal employees at 55 and public library employees at 55 seem to be low in comparison with retirement ages of foreign countries.

AMOUNT OF PENSION.

We find that the amount of the pension in foreign countries is rarely based on final salary, as it is in some Illinois funds, nor is it in any case a flat sum, as it is in our teachers' funds and in our fund for municipal employees. In foreign systems, the pension is generally a per cent of average salary multiplied by years of service. For example, in a number of funds cited above it is one-sixtieth of the average salary for each year of service with a specification of the maximum allowed. Thus, with 30 years of service, a man obtains one-half his average salary as a pension. This method of determining the amount of pension obviates the possible abuse of raising a salary at the end of service in order to increase a pension, as is sometimes done when pension is based on final salary only.

EFFECT OF NONCONTRIBUTORY PENSIONS ON WAGES.

It seems to be generally recognized that the payment of noncontributory pensions leads to a lowering of wages.

LESSON TO BE DRAWN FROM THE EXPERIENCES OF FOREIGN COUNTRIES.

It is not likely that countries which began noncontributory pensions sixty years ago had the foresight to predict the present cost, but fortunately at the present time experience has taught us what we may expect if we operate a pension system with little or no regard to an adequate reserve fund. The testimony that some departments of the governments in England, Germany and Austro-Hungary pay from 30 to 40 per cent as much for pensions as for salaries is the answer of experience.

CHAPTER III.

HISTORICAL SKETCH OF THE PENSION LAWS OF ILLINOIS.

GENERAL SURVEY OF THE FIELD.

Firemen's Benevolent Associations.

The earliest legislation in Illinois on the subject of pensions that the writer is aware of was an act of 1852 (Laws of 1852, p. 65) which incorporated the Firemen's Benevolent Association of the City of Chicago for the relief of distressed, sick and disabled members and their immediate families, and required agents for insurers other than Illinois corporations to pay to the association 2 per cent of all premiums on insurance effected against loss by fire in Chicago. The validity of this compulsory payment for the relief of persons engaged in a service of public benefit, imposed on a class which especially profited from it, was upheld in *Firemen's Benevolent Association v. Lounsbury*, 21 Ill., 511. The requirement was repealed, however, in 1861 (Private Laws of 1861, pp. 118, 146), and the 2 per cent tax made payable to the city of Chicago instead. The Firemen's Association was dissolved (Private Laws of 1861, p. 47; Private Laws of 1863, p. 29). When the Chicago charter was revised in 1863, it was provided that one-eighth of the proceeds of the 2 per cent tax should be set aside for a fund for distressed firemen disabled in the service of the city, and disbursed under regulations of the city council (Chap. 8, Secs. 5, 6, 7; Chap. 12, Sec. 8, Private Laws of 1863, pp. 40, 99, 126).

Thereafter an act of 1867 (Private Laws of 1867, Vol. 1, p. 147) incorporated the Benevolent Association of the Paid Fire Department of the City of Chicago, and provided that the one-eighth of the fire rates paid to the city, instead of being disbursed by the city, should be paid annually by the city to the association as a trust fund for the benefit of firemen disabled in the city's service. These fire rates were increased by the Cities and Villages Act of 1872, under which Chicago organized in 1875, by adding to the 2 per cent of the premiums of the foreign companies, 2 per cent of their net receipts. However, Chicago resumed the administration of firemen's relief by establishing a relief fund for policemen and firemen under the act of 1874 (R. S. 1874, Chap. 24, Secs. 221-226), and the provision for paying rates to the Benevolent Association was repealed by act of 1877 (Laws of 1877, p. 62), if indeed it had not already been repealed by the establishment of the city pension fund (*Benevolent Association v. Farwell*, 100 Ill., 197).

In 1867, a Firemen's Benevolent Association was also incorporated for Springfield with a requirement, like that in the charter of the Chicago association, for payment to it of a tax of 2 per cent of all premiums on insurance effected against loss by fire in Springfield (Private Laws of 1867, Vol. 1, p. 143).

Payments to Families of Volunteers in the Civil War.

At the time of the Civil War numerous statutes authorized or ratified payments by specified counties for the support of the families of volunteers. (See, for example, Laws of 1863, pp. 39, 40, 56; Private Laws of 1865, pp. 106, 112, 118, 123).

General Pensions for Policemen and Firemen.

The first general Illinois pension law was the act of 1874, mentioned above. It authorized cities to establish funds for the benefit of policemen and firemen disabled in discharge of duty, and for their dependents if they were killed. The act was revised in 1877. The revised act established a scheme to which later pension laws have in the main adhered. It provided that the fund, set apart in the city treasury, should be administered by a pension board with power to determine finally the right of an applicant to a pension and to order its payment; and that the fund should be maintained partly from a small assessment levied on the salaries of members of the force, and partly by the setting aside of specified items of city revenue. These were items in which the beneficiaries of the fund were especially concerned, such as fines for violating department rules, or the proceeds of which their interested vigilance was perhaps thought likely to increase, such as fines for violating fire ordinances, and the proceeds of the sales of stolen goods. Where a policeman or fireman was killed in course of duty or died after long service, a pension was granted to his widow while unmarried, or to his children while under 16. In 1887 the law was again revised. The funds for policemen and firemen in cities of 50,000 were separated and put under the management of different boards. A pension was granted for superannuation. In 1907, the firemen's act was extended to cities and towns of 5,000. In 1909, a distinct law was passed for police pension funds in cities of 20,000 to 50,000, and in 1913 the law was extended to cities and towns of 9,000. In 1915, a separate statute regulated police pensions in cities of 200,000. Pensions for policemen employed by park commissions were established in 1911.

Pensions for Teachers and Employees in Public Schools.

In 1895, a pension system was provided for teachers and employees in public schools. The law applied only to cities of 100,000, and so was limited to Chicago. In 1903, the employees' pension fund was separated from the teachers' fund, and regulated by a different and in some respects more liberal law. In 1907, the teachers' pension fund law was revised. The revised law, speaking generally, permits retirement after 25 years of teaching on a pension of \$400, and, in case of disability, after 15 years of teaching with a pension proportioned to the time of service. Statutes of 1911 and 1913 authorized the establishment of similar pensions in districts of 1,000 to 100,000, and by

an act of 1915 a State pension fund was created to be administered substantially as is the Chicago fund, but by a State board and for the benefit of teachers in all public schools of the State except in Chicago and Peoria, where the former pension system remains in force. The State fund is supported by deductions from salaries and by a one-tenth mill tax on property in the school districts affected.

Pensions for Other Classes of Public Employees.

In 1905, a law was passed for a pension fund for waterworks employees in Chicago, and in the same year an act for a fund for such employees of Chicago public libraries as should choose to contribute to its support. In 1911, acts were passed for pension funds for municipal employees under civil service, in Chicago, and for house of correction employees; and in 1914, for officers and employees of counties having a population exceeding 150,000.

Provisions for Other Forms of Relief.

Reference should also be made to several other statutes which, without providing for the maintenance of a pension fund, do nevertheless provide for the payment of public money by way of relief because of service in public employment when, except for the statutes, there would often be no liability; namely, the act for relief to indigent soldiers and sailors (Laws of 1895, p. 83), the Military Code (Laws of 1901, p. 143), and the Workmen's Compensation Act (Laws of 1913, p. 337). The act for pensioning fire insurance patrolmen (R. S., Chap. 24, Secs. 423-434) should also be mentioned, as, though the patrolmen are not engaged in public employment, nor are their pensions paid out of public money, the pensions are regulated and the fund is maintained by assessments made by authority of the statute.

TABLES IN APPENDIX "A."

Tables designed to show in detail the history of pension legislation in Illinois, including the acts last referred to, are given in Appendix "A."

The acts for relief of the poor (R. S., Chap. 107), of the blind (R. S., Chap. 23, Secs. 245-253) and of mothers (R. S., Chap. 23, Secs. 289-316) are not included, as it is conceived they are not properly pension laws, since the right to relief is not based on service.

SOURCES OF REVENUE.

It will be observed from the above mentioned tables that there appears a tendency to increase slightly from time to time the percentage of salary to be contributed by the beneficiaries. But much more striking are the successive increases made in the amounts drawn from other sources. The act of 1874 establishing a joint fund for policemen and firemen was amended in 1875, 1877, 1879, 1883 and 1901, and each time a new source of revenue was added. The firemen's fund established under the act of 1887 received accessions of revenue from new sources, or by increase of amounts to be set aside from old sources, in 1889, 1901, 1905, 1907 and 1915; the police fund of 1887, in 1903 and 1911; the school employees' fund of 1895, in 1907 and 1913; the municipal

employees' fund of 1911, in 1915; and the houses of correction employees' fund of 1911, in 1915. The Legislature of 1915, in revising the law for pensions for firemen and park policemen, and in establishing new pension funds for Chicago policemen and for school teachers, made a new departure in authorizing local general property taxes, not to exceed specified rates which vary from one-twenty-fifth to seven-tenths of a mill on the dollar, as one source of revenue for the funds.

REFUNDS.

Most of the pension laws provide for a return of all or part of the contributions made to the fund by an employee who resigns or whose position is abolished before he becomes entitled to a pension. But there is no provision for a return to policemen or firemen. Pensions for these two groups were the first to be established, and perhaps the matter was not then thought of. But even in recent provisions and extensions of policemen's and firemen's pensions there is no provision for refunding contributions.

AGE AND PERIOD OF SERVICE.

The first laws to provide for retirement on pension after a stated period of service were the acts of 1887 for policemen and firemen in cities of 50,000. The period of service for policemen was 20 years, and this with few exceptions has been the period fixed under other pension funds. For teachers, however, the time is 25 years. The time for firemen was 25 years at first, but was reduced to 22 years in 1889, and to 20 years in 1913.

It was a condition in the acts of 1887 that the retiring pensioner must be 50 years old. Whether age as well as length of service should be a condition for retirement involves a question of public policy, and its answer, moreover, must considerably affect the demands on the pension fund. Yet it is hard to detect in the statutes any indication of a policy upon the point.

In 1895, a pension law for teachers and employees of Chicago public schools permitted retirement after 20 or 25 years of service without regard to age. In 1903, the public school employees were given, in addition, a right to retire at 55 after only 10 years of service. In 1905, acts for waterworks employees of Chicago and for fire insurance patrolmen gave a right to retire after 20 years of service to persons aged only 50. But the Chicago public libraries act of the same year followed the plan of the act for public school employees and allowed retirement after 20 years of service without regard to age, or after 10 years of service at 55. In 1907, the age limit as to firemen was struck out even as to cities and towns of 5,000 to 50,000, to which in that year firemen's pensions were extended. Yet in 1909, in extending policemen's pensions to cities of 20,000 to 50,000, the age limit of 50 was preserved and still exists; though in 1911, it was struck out as to cities of over 50,000. The park policemen's act of 1911 contained no age limit, but in the act of the same year for employees of houses of correction there was an age limit of 50, and the 1911 law for municipal employees placed the age, with some qualifications, at

55. In 1915, the houses of correction act was amended by striking out the age limit of 50, and the park policemen's act amended by inserting an age limit of 50. The teachers' pension act of that year, applying outside of Chicago and Peoria, limited the right to retire to teachers 50 years old; but no such condition was imposed as to Chicago or Peoria teachers. The county employees' act of 1915 fixed, with qualifications, the age for retirement at 55.

The present situation, therefore, is that one may retire on a pension as soon as he has completed a fixed term of service, though under 50, if he is a fireman, but not if he is a fire insurance patrolman; if he is a policeman in a city of 50,000, but not if he is a policeman in a city of less than 50,000 or a park policeman; if he is a teacher in Chicago or Peoria, but not if he is a teacher in any other city; or if he is employed by Chicago in a school, library or house of correction, but not if otherwise employed by the city, or if employed by Cook County.

PENSIONS TO SURVIVORS.

Liberal pensions have been provided for widows and children of firemen, policemen and employees of houses of correction; slighter relief (not over one year's benefit) for widows and children of public school and library employees; and none at all for widows or children of teachers or, under present laws, of municipal and county employees. This difference of treatment is continued through the most recent enactments. In 1915, allowances to surviving dependents were continued, and in some instances increased, in case of firemen, Chicago policemen, park policemen and employees of houses of correction; while laws which contained no such allowances were passed concerning pensions for teachers and municipal and county employees. Section 5 of the Workmen's Compensation Act excludes from its benefits employees of a municipality to whom or to whose representatives a pension is payable in case of accidental injury or death; and if Chicago elects to come under the act, it would seem that the fact that the widow of a Chicago public school or library employee is entitled under the pension law to a sum equal to one year's retiring allowance will exclude her from the compensation equal to four years' full earnings which she might receive under the workmen's act, if the pension law were not in existence. Moreover, it is perhaps questionable whether school teachers and municipal and county employees who have served long enough to be entitled to retire on a pension for disability caused by accident are not thereby put outside the scope of the Workmen's Compensation Act altogether, so that in case of death by accident their dependents would be wholly without relief.

Where pensions are provided for survivors, the conditions on which they are granted vary considerably. Under the act of 1871 for policemen and firemen, pensions were limited to cases of death from injury received in discharge of duty. But in the revision of 1877, provision was also made for survivors when the policeman or fireman died in service after ten years of service, whatever the cause of death. There is still no pension for survivors of a policeman who has served less than ten years unless death is traceable to service.

On the other hand, pensions to survivors on death in service, however short the service has been and whatever the cause of death, were provided in the revision of the public school employees' act in 1903; in the establishment of the public library and houses of correction pension systems in 1905 and 1911; and in the revision of the firemen's pension law in 1915. The water works employees' act of 1905 allowed a pension on death after three years of service.

As to death after retirement on pension, the act of 1887 made provision for survivors in every case where a pensioned fireman died, but not until 1899 were pensions given to survivors of policemen pensioned after twenty years of service, and not until 1913 to survivors of policemen pensioned for disability, and then only in cities of 50,000 or more population.

The houses of correction law gives substantial pensions to survivors in case of death in service or in retirement on pension. The school employees' and library employees' laws provide relief for survivors in case of death in service but not in case of death in retirement. It has already been remarked that survivors of school teachers or of municipal or county employees are not provided for at all.

CHAPTER IV.

SURVEY OF PENSION LAWS IN FORCE IN ILLINOIS
JANUARY 1, 1916, FOR PUBLIC SERVICE EM-
PLOYEES* AND COMPARATIVE REFERENCES
TO PROVISIONS IN PENSION LAWS IN
OTHER STATES FOR SUCH EMPLOYEES.

The Historical Sketch of the Laws of Illinois, as given in chapter III, page 36, together with the Tabular Digest of Appendix "A," reveals the fact that beginning with the year 1852 a large number and variety of pension laws have been placed on the statute books of this State. Some of these laws have been revised, in some instances a number of times; others have become dead-letters; one has not been put in force at date of this writing; and others are still effective in full. The result of this legislation has been that on January 1, 1916, there were in force, or likely to become in force, eighteen laws, exclusive of the law for the relief of mothers and the one for the relief of the blind, which are sometimes popularly referred to as pension laws. Of these eighteen, seventeen were either by way of payment of public money for public service rendered, or of creating and regulating liability for injuries received in discharge of duty, and one was for regulating pensions and maintaining funds by assessments in the case of a private concern.

Of these the Military Code (Laws of 1901, p. 143) and the Workmen's Compensation Act (Laws of 1913, p. 337) are really not pension laws, inasmuch as their prime object is the determination and regulation of liability in the event of injury, while the act for the relief of army and navy veterans (Laws of 1895, p. 83) merely creates machinery for providing relief to such persons in indigent circumstances different from that created in the cases of other persons in need.

The elimination of these three leaves fifteen laws on the statute books on January 1, 1916, and to these the Tabular Digest of Appendix "B" refers.

Among these fifteen laws, three deserve special mention:

The Park Police Act of 1915 requires, to be in effect for any particular park, the consent, to such act, of the board of park commissioners for such park, expressed by resolution or otherwise, and recorded in the office of the recorder of deeds of the county in which the park is situated. Such consent was not recorded in the case of any park on January 1, 1916. This act was, therefore, not in effect on that date, and indeed was not in effect on December 1, 1916.

* Illinois laws included in this survey are summarized in the tabular digest comprising Appendix "B."

The County Employees' Act was declared invalid in the Superior Court of Cook County on August 2, 1916, and the amounts paid into the funds were ordered returned to the contributors.

The Fire Insurance Patrolmen's Act does not involve the expenditure of public money. It is given in the Tabular Digest for the sake of completeness and also to call attention especially to the fact that this is the only act on the statute books of this State regulating the payment of pensions in private, as distinguished from public, institutions.

The object of this chapter is to take a brief survey of the provisions of these laws, with references to provisions in the laws of other states regulating payment of pensions to public service employees.

The references to the laws of other states are taken from Appendix "B" of the Report of the Commission on Pensions for the Commonwealth of Massachusetts, published in 1914, entitled "Digest of Pension Legislation relating to State, County and Municipal Employees of all States in the United States," and an extension of this report brought down to August 1, 1916, by the Legislative Reference Bureau of Illinois.

From these sources we find that the following pension legislation has been enacted in the different states of the United States:

State and city.	Legislation.	Beneficiaries.
Alabama.	Gen. Laws of 1911, No. 254, Sec. 18½. Applies to cities of 25,000 to 50,000.	Firemen.
	Acts of 1911, No. 431. Applies to all cities over 25,000.	Firemen.
	Acts of 1911, No. 254. Applies to all cities of 25,000 to 50,000.	Policemen
	Acts of 1911, No. 431. Applies to all cities over 25,000.	Policemen.
	Acts of 1915. Applies to counties having a population of 80,000 and not exceeding 82,000.	Teachers.
Arizona.	Session Laws, 1912. Applies to entire state.	Teachers.
Arkansas.	Acts of 1915.	Firemen.
California.	No legislation.	
	Acts of 1901, Ch. 87, amended by Acts of 1903, Ch. 143. Applies to entire state.	Firemen.
	Acts of 1897, Ch. 57, amending Acts of 1889, Ch. 62, as further amended by Acts of 1891, Chs. 210, 248. Applies to entire state.	Policemen.
Oakland.	Acts of 1913, Ch. 694.	Teachers.
	City Charter of 1910.	Firemen.
	City Charter of 1910.	Policemen.
Colorado.	Acts of 1909, Ch. 214. Applies to Denver.	Teachers.
Denver.	Acts of 1903, Ch. 172, and City Charter of 1904.	Firemen.
	Act applies to cities of over 100,000.	
	Acts of 1913, Ch. 120. Applies to cities of over 100,000.	Policemen.
Connecticut.	Acts of 1893, Ch. 115. Applies to all cities having police department under police commission, which shall accept it.	Policemen.
Bridgeport.	City Charter of 1907.	Firemen.
	Special Acts of 1907, revising City Charter.	Policemen.
New Haven.	Acts of 1894.	Firemen.
	Acts of 1894.	Policemen.
	Acts of 1911, Special Act amending charter.	Teachers.
New London.	Acts of 1911, No. 461.	Teachers.
Delaware.	No state-wide legislation.	
Wilmington.	Acts of 1907, Ch. 185, and amendments.	Policemen.
	Acts of 1911, Ch. 208, amending Acts of 1913, Ch. 210.	Teachers.

State and city.	Legislation.	Beneficiaries.
Florida.	No legislation.	
Georgia.	No state-wide legislation.	
Atlanta.	Acts of 1910, amending City Charter, and Amendment of 1912.	Firemen.
	Laws of 1910, amending City Charter.	Policemen.
	Acts of 1912, amending City Charter.	Teachers.
Idaho.	No legislation.	
Illinois.	See Appendix A, p. —, and Appendix B, p. —	
Indiana.	Acts of 1905, Ch. 129, as amended by Acts of 1913, Ch. 52. Applies to all first- and second-class cities, and all third- fourth- and fifth-class cities which accept it.	Firemen.
	Acts of 1913, Ch. 334. Applies to cities of 20,000 to 100,000.	Teachers.
	Acts of 1915.	Teachers.
Indianapolis.	Acts of 1908 as amended by Acts of 1913, Ch. 128. Applies to cities of first and second class, and to all other cities which accept it.	Policemen.
	Acts of 1907. Applies to cities of 100,000 or over.	Teachers.
Terre Haute.	Acts of 1913, Ch. 77. Applies to cities of 55,000 to 60,000.	Teachers.
Iowa.	Laws of 34th G. A., Ch. 61, and subsequent amendments. Mandatory on cities having a paid department; permissive on cities having an organized department.	Firemen.
	Laws of 34th G. A., Ch. 51, amending Laws of 33d G. A., Ch. 62. Applies to entire state.	Policemen.
Kansas.	Acts of 1911, Ch. 280. Applies to cities of the first class.	Teachers.
	Acts of 1915.	Firemen.
	Acts of 1915.	Policemen.
Kentucky.	Acts of 1912, Ch. 129. Applies to all first-class cities.	Teachers.
Louisville.	Acts of 1912, Ch. 122. Mandatory on all first-class cities.	Firemen.
	Acts of 1912, Ch. 112. Applies to all first-class cities.	Policemen.
	Acts of 1914.	Teachers.
Louisiana.	Acts of 1910, Ch. 277. Applies to Supreme Court judges.	Judges.
New Orleans.	Acts of 1888, No. 63.	Policemen.
	Acts of 1910, Act No. 116. Applies to Parish of Orleans.	Teachers.
	Acts of 1912, Act No. 152, amending Acts of 1902, Act No. 43.	Firemen.
Maine.	Acts of 1911, Ch. 198, amending Acts of 1909, Ch. 132. Applies to Supreme Court and Superior Court judges.	Judges.
Portland.	Acts of 1913, Ch. 75. Applies to entire state.	Teachers.
	Acts of 1906.	Policemen.
	Special Acts of 1909, Ch. 356.	Firemen.
Maryland.	Acts of 1904, Ch. 236. Applies to judges of Circuit Court, Supreme Court of Baltimore and Court of Appeals.	Judges.
	Acts of 1912, Ch. 135. Applies to entire state.	Teachers.
	Acts of 1912, Ch. 463. Applies to Alleghany Co.	Teachers.
	Acts of 1915. Gives board power to waive age limit where it thinks proper.	Teachers.
Baltimore.	Acts of 1886, Ch. 459, and amendments.	Policemen.
	City Charter of 1900, Sects. 70 and 445.	Firemen.
	Acts of 1912.	Teachers.
Massachusetts.	Relief Fund. Acts of 1890, Ch. 450, amended by Acts of 1902, Ch. 108, and Acts of 1906, Ch. 171. Applies to whole state.	Firemen.
	Acts of 1898, Ch. 267, and subsequent laws. Applies to all cities and towns except those having pension systems under special Acts.	Firemen.
	R. L. of 1902, Ch. 108, Sects. 29-30, with amendments. Applies to cities of over 75,000 inhabitants except Boston.	Policemen.
	R. L. of 1902, Ch. 108, Sect. 31, with amendments. Applies to all cities and towns not having pension systems, upon acceptance.	Policemen.
	Acts of 1908, Ch. 498. Applies to all cities and towns accepting act, except Boston.	Teachers.
	Acts of 1913, Ch. 832. Applies to entire state, except Boston.	Teachers.

State and city.	Legislation.	Beneficiaries.
	Acts of 1885, Ch. 162 and subsequent Acts. Applies to all judges.	Judges.
	Acts of 1909, Ch. 453, amended by Acts of 1913, Ch. 545.	Metropolitan park policemen.
	Acts of 1911, Ch. 675.	District policemen.
	Acts of 1911, Ch. 532, and subsequent Acts. Applies to all employees of Commonwealth excepting those entering service after 55 years of age who are prohibited from remaining in service after reaching age of 70 years.	All public service employees of state.
	Acts of 1911, Ch. 634, and subsequent Acts. Applies to counties accepting it.	All public service county employees.
	Acts of 1910, Ch. 619, and amending Acts of 1911, Ch. 338. Applies to all cities and towns after acceptance, except Boston.	All public service employees of cities and towns.
	Acts of 1912, Ch. 503, as amended by Acts of 1913, Ch. 671. Applies to all cities and towns, except Boston, accepting it.	All public service employees of cities and towns.
	Acts of 1907, Ch. 458.	Civil War veterans, employees of state.
	Acts of 1912, Ch. 447.	Civil War veterans, employees of cities and towns.
	Acts of 1909, Ch. 398.	Civil War veterans, employees of counties.
	Acts of 1908, Ch. 601, and amendments. Applicable to prison officers and instructors who began employment previous to June 7, 1911.	Prison officers.
Boston.	Acts of 1878, Ch. 244, and amendments. Acts of 1880, Ch. 107, and subsequent Acts. Acts of 1900, Ch. 237, and amendments. Acts of 1911, Ch. 413, and amendments.	Policemen. Firemen. Teachers. Public service employees of Boston.
	Acts of 1911, Ch. 113, and amendments.	Civil War veterans, employees of Boston.
Michigan.	Public Laws of 1913, p. 787. This is a concurrent resolution proposing an amendment to Sec. 14 of Art. 10 of the Constitution of the state relative to pensioning firemen.	Firemen.
Detroit.	Act of 1915. Local Acts of 1885, No. 386. Acts of 1893.	Teachers. Firemen. Policemen.
Grand Rapids.	Acts of 1907, amending charter. Local Acts of 1891, No. 309.	Teachers. Firemen.
Minnesota.	Acts of 1911, Ch. 383. Applies to cities of 10,000 or over. Acts of 1913, Ch. 318, amending Acts of 1907, Ch. 24. Applies to cities of 50,000 or over. Acts of 1913, Ch. 290, amending Acts of 1903, Ch. 159.	Teachers. Firemen. Policemen.
	Acts of 1913, Ch. 269. Applies to Supreme and District Court judges.	Judges.
St. Paul	Acts of 1915. Acts of 1892.	Policemen. Firemen.
Minneapolis.	Acts of 1903, Ch. 159, with amendments. Applies to cities of over 50,000. Acts of 1892.	Policemen.
	Acts of 1903, Ch. 159, with amendments. Applies to cities of over 50,000.	Firemen. Policemen.
Duluth.	Under authority of "10,000 Population" Act.	Teachers.
Mississippi.	Under authority of "10,000 Population" Act. No legislation.	Teachers.

State and city.	Legislation.	Beneficiaries.
Missouri. St. Louis.	No state-wide legislation. R. S. of 1899, Sect. 6411. Private Teachers' Association.	Firemen. Teachers. Teachers.
Montana.	Act of 1915.	Teachers.
Nebraska.	Comp. Stats. of 1911, Sects. 3555-3559. Applies to all first-class cities of less than 25,000, and second-class cities having organized volunteer companies.	Firemen.
	Comp. Stats. of 1911, Sects. 3561-3562. Applies to all metropolitan and first-class cities.	Firemen.
	R. L. of 1913, Art. 6, Sects. 3991-3999. Applies to all metropolitan cities.	Policemen.
	Acts of 1913, Ch. 152. Applies to public library employees in first-class cities.	Public library employees.
	Acts of 1915. Applies to cities of first class having less than 25,000, or any city of the second class.	Firemen.
	Act of 1915, amending former Act.	Policemen.
Omaha.	Acts of 1909.	Policemen.
	Acts of 1909, Ch. 132. Applies to all metropolitan cities.	Teachers.
Nevada.	No legislation.	
New Hampshire.	Acts of 1907, Ch. 85, Sect. 1, and subsequent amendments, on acceptance by town or city. Applies to any town or city.	Firemen.
	Acts of 1907, Ch. 85, and subsequent amendments. Applies to entire state.	Policemen.
	Acts of 1915.	Teachers.
New Jersey.	Acts of 1885, Ch. 148, and amendments. Applies to all cities.	Policemen.
	Acts of 1885, Ch. 250, and amendments. Applies to all cities accepting provisions.	Policemen.
	Public Laws of 1902, Ch. 270, and subsequent amendments. Applies to all first class cities accepting Act.	Firemen.
	Acts of 1903, and amendments.	Teachers.
	Public Laws of 1905, Ch. 65, and subsequent amendments. Applies to all municipalities, other than those of the first class, having paid fire departments.	Firemen.
	Acts of 1908, Ch. 74.	Policemen.
	Acts of 1908, Ch. 313, amended by Acts of 1911, Ch. 185. Applies to chancellor, chief justice and associate justices of Supreme Court.	Judges.
	Acts of 1910, Ch. 48, amending Acts of 1895, Ch. 91. Applies to park police.	Park policemen.
	Acts of 1912, Ch. 373, amending Laws of 1911, Ch. 72. Applies to all cities other than first class.	Policemen.
	Acts of 1913, Ch. 215. Applies to all cities having health boards, if adopted by two-thirds of employees.	Health Board employees.
	Act of 1916.	Policemen.
Jersey City.	Laws of 1902, Ch. 270, amended by Laws of 1908, Ch. 142, and Laws of 1912, Ch. 240.	Firemen.
Elizabeth.	Acts of 1907.	Policemen.
Newark.	Acts of 1902.	Policemen.
New Mexico.	No legislation.	
New York.	Laws of 1909, Ch. 29. Applies to volunteer firemen.	Firemen.
	Acts of 1885, Ch. 486, and amendments. Applies to cities of over 1,000,000 inhabitants.	Policemen.
	Acts of 1911, Ch. 449. Applies to entire state.	Teachers.
	Acts of 1913, Ch. 138. First district.	Employees of Supreme Court.
	Acts of 1913, Ch. 185. Second and ninth districts.	Employees of Supreme Court.
New York City.	Laws of 1901, Ch. 466, and amendments.	Firemen.
	Acts of 1857, Ch. 569, and subsequent acts.	Policemen.
	Acts of 1909, Ch. 505, and reenactments.	Teachers.
	Acts of 1901, Ch. 466, and amendments.	Street cleaners.
	Acts of 1901, Ch. 466, and amendments.	Employees of Board of Health.

State and city.	Legislation.	Beneficiaries.
	Acts of 1911, Ch. 669, and Acts of 1912, Ch. 479. Applicable to employees not eligible under other systems.	Public service employees.
Syracuse.	Laws of 1905, Ch. 683, and amendments.	Firemen.
Yonkers.	Laws of 1908, Ch. 452.	Firemen.
Rochester.	Acts of 1907, Ch. 755.	Policemen.
	City Charter of 1907, and amendments.	Teachers.
Buffalo.	City Charter of 1907, and amendments.	Teachers.
North Carolina.	No legislation.	
North Dakota.	Acts of 1910, Ch. 123. Applies to entire state.	Firemen.
	Acts of 1913, Ch. 251.	Teachers.
Ohio.	General Code of 1910, Sects. 4600-4615. Applies to all cities and towns having a fire department supported in whole or in part at public expense.	Firemen.
	General Code of 1910, Sects. 4616-4631. Applies to all cities and towns having departments supported in whole or in part at public expense.	Policemen.
	General Code of 1910, Sects. 4632-4647. Applies to all cities and towns having sanitary police departments supported in whole or in part at public expense.	Policemen.
	Acts of 1911, S. B. 142, amending Sects. 7877-7878-7891 of General Code. Applies to entire state.	Teachers.
	Act of 1915, amending previous Act.	Firemen.
	Act of 1915, amending previous Act.	Policemen.
Dayton.	General Code of 1910, H. B. No. 934.	Firemen.
Cleveland.	General Code of 1910.	Firemen.
Cincinnati.	Acts of 1892.	Policemen.
Columbus.	Acts of 1903.	Policemen.
Springfield.	Acts of 1904.	Policemen.
Oklahoma.	Laws of 1913, Ch. 244. Applies to all incorporated cities and towns.	Firemen.
Oregon.	Acts of 1913, Ch. 287. Applies to all cities over 50,000.	Policemen.
	Acts of 1913, Ch. 58, amending Acts of 1911, Ch. 280. Applies to all districts having more than 10,000 children of school age.	Teachers.
Pennsylvania.	Acts of 1893, No. 82.	Policemen.
	Acts of 1913, No. 849, amending Acts of 1901, No. 14. Applies to cities of second class.	Firemen.
	Acts of 1913, No. 849, amending Acts of 1901, No. 14. Applies to second-class cities.	Policemen.
	Penn. School Code of 1911.	Teachers.
	Acts of 1913, No. 461. Applies to all first-class cities.	Municipal employees.
	Laws of 1913, No. 38. Applies to all second-class cities.	Municipal employees.
	Act of 1915. Applies to counties having a population of less than 1,500,000 and more than 1,000,000.	County employees.
Philadelphia.	Acts of 1874.	Firemen.
	Acts of 1891.	Policemen.
	Penn. School Code of 1911.	Teachers.
Pittsburg.	Acts of 1893.	Policemen.
Rhode Island.	General Laws of 1909, Ch. 274. Applies to Supreme and Superior Court judges.	Judges.
	General Laws of 1909, p. 1350.	
	School Laws of 1910, pp. 27 and 94.	Firemen.
	Act of 1915, amending previous Acts.	Teachers.
	Act of 1916, authorizing City of Providence to establish a retirement board with power to prescribe what class of employees may be retired.	Teachers.
Pawtucket.	Public Laws of 1913, Ch. 1007.	Various.
Providence.	Acts of 1896, Ch. 372, and Acts of 1913, Ch. 977.	Firemen.
	Acts of 1897, Ch. 485.	Firemen.
	Acts of 1901, Ch. 930, as amended by Acts of 1911, Ch. 734 and Ch. 976.	Teachers.
South Carolina.	Acts of 1898 and 1902.	Policemen.
Charleston.	City Ordinance of 1902.	Firemen.
	City Ordinance of 1904, and amendments.	
South Dakota.	No legislation.	
Tennessee.	No state-wide legislation.	
Chattanooga.	Acts of 1909, Ch. 408, as amended by Acts of 1911, Ch. 2.	Firemen.
Texas.	Acts of 1907.	Firemen.
Utah.	Acts of 1911, Ch. 146. Applies to all cities and towns having equipment of over \$500.	Firemen.
	Laws of 1913, Ch. 91.	Teachers.

State and city.	Legislation.	Beneficiaries.
Vermont.	Acts of 1912, No. 70.	Teachers.
	Act of 1915.	Teachers.
Virginia.	Acts of 1908, Ch. 181.	Firemen.
	Acts of 1910, Ch. 97.	Teachers.
Richmond.	Acts of 1898.	Policemen.
Washington.	Acts of 1909. Applies to all cities and towns.	Firemen.
	Acts of 1909, Ch. 39, as amended by Acts of 1911, Ch. 18. Applies to all first-class cities.	Policemen.
	— 1914, referendum to the people. Senate Bill No. 48, Acts of 1913.	Teachers.
West Virginia.	Acts of 1915, amending previous Acts.	Policemen.
Wisconsin.	Act of 1915.	Teachers.
	Acts of 1907, Ch. 214. Applies to all second-, third- and fourth-class cities.	Firemen.
	Acts of 1907, Ch. 87. Applies to all first-class cities.	Firemen.
	Acts of 1907, Ch. 671. Applies to all second- and third-class cities.	Policemen.
Milwaukee.	Acts of 1911, Ch. 323, and amendments.	Teachers.
	Acts of 1899.	Firemen.
	Acts of 1891.	Policemen.
	Acts of 1909, Ch. 510, and amendments.	Teachers.
Wyoming.	No legislation.	

MANAGEMENT.

Under the laws regulating pensions in this State, except those of the private fund, both employing body and employee are represented on the board of trustees in charge of the fund. Here, however, uniformity ceases. In point of numbers and in method of selection of members, the different boards present a great variety. In some instances the employing body or a city official appoints a majority of the members; in others, the employees and beneficiaries, voting separately or together, elect a majority; and in others certain officials are ex officio members of the board.

The following table exhibits in outline the number and composition of the several boards of trustees:

Beneficiaries.	Number of trustees.	Number who are trustees by virtue of office held.	Number appointed by governing body or by some public official.	Number elected by employees.	Number elected by beneficiaries.	Number elected by employees and beneficiaries voting together.
Firemen.....	8	4	0	3	1	0
Chicago policemen.....	5	0	3	1	1	0
Policemen in cities of 50,000 or over.....	5	0	3	1	1	0
Policemen in cities of 9,000 to 50,000.....	3	0	2	0	0	1
Park policemen (Act of 1913).....	5	0	3	1	1	0
Park policemen (Act of 1915).....	5	0	3	1	1	0
Fire insurance patrolmen.....	5	5	0	0	0	0
County employees.....	5	5	0	3	0	0
Municipal employees of Chicago.....	5	5	0	3	0	0
Public school employees.....	5	5	0	4	0	0
Public library employees.....	5	5	0	13	0	0
Houses of correction employees.....	5	5	0	2	1	0
State teachers.....	5	2	2	0	0	0
Chicago teachers.....	9	1	2	6	0	3
Peoria teachers.....	3 or 9	$\frac{1}{2}$ of no.	0	$\frac{2}{3}$ of no.	0	0

¹ One of the these must be a member of the board of trustees of the library.

² Two members are elected by the board of education from among their own number.

In each of the following cases, the treasurer of the city, county or State, as the case may be, is custodian of the fund:

Firemen; policemen in cities of 9,000 to 50,000 inhabitants; county employees; municipal employees of Chicago; public school employees; public library employees; houses of correction employees; State teachers; Chicago teachers; Peoria teachers.

In each of the following cases the treasurer is appointed or elected by the board of trustees of the fund:

Chicago policemen; policemen in cities of 50,000 or more inhabitants; park policemen (Act of 1913); park policemen (Act of 1915); fire insurance patrolmen.

The terms of office for employees or beneficiaries elected to the several boards are, in the case of the Peoria teachers, fixed by the governing board of the school district, and in the other cases fixed by statute, at terms varying from one to three years.

In the State of Illinois, in all instances, except that of the fire insurance patrolmen's fund, the employees contribute directly by deductions from salaries and are represented on the board of management. In the exception noted, the employees do not contribute directly from salaries and are not represented on the board. It seems to be a principle recognized generally in all states that when the employees contribute directly from salaries, they are represented on the board of management of the fund, and that when they do not so contribute they are not so represented. The following exceptions, among others, however, may be noted:

Cases in which the employees do not contribute directly from salaries to the fund but are represented on the board of management:

For Firemen: Ohio (Dayton); Oklahoma.

For Policemen: South Carolina (Charleston); Oregon.

For Teachers: Louisiana (New Orleans).

Cases in which employees contribute directly from their salaries to the fund, but are not represented on the board of management:

For Firemen:

California (Oakland); Connecticut (Bridgeport and New Haven); Kentucky (Louisville); Rhode Island (Providence).

For Policemen:

California (state-wide); Colorado (Denver); Connecticut (Bridgeport and New Haven); Delaware (Wilmington); Iowa (state-wide); Kentucky (Louisville); Maryland (Baltimore); New Jersey (Elizabeth and Newark); Oregon; Pennsylvania; Rhode Island (Providence).

For Teachers:

Connecticut (New Haven and New London); Kansas; Nebraska; Virginia.

SOURCES OF REVENUE—CONTRIBUTIONS FROM EMPLOYEES.

As already stated, the employees contribute directly from salaries to pensions, under all pension acts involving the expenditure of public money in the State of Illinois. This practice is by no means universal in this country. Out of 177 acts investigated, 65, or about 37 per cent, do not provide for direct contributions from salaries of employees. Among these may be mentioned:

For Firemen:

Alabama; California (except Oakland); Colorado (Denver); Georgia (Atlanta); Maine (Portland); Maryland (Baltimore); Massachusetts (Bos-

ton); Michigan (Grand Rapids); Minnesota; Nebraska; New Hampshire; New York (New York City, Yonkers); North Dakota; Ohio (Dayton); Oklahoma; Pennsylvania (Pittsburg); South Carolina (Charleston); Tennessee (Chattanooga); Utah; Virginia.

For Policemen:

Alabama; Connecticut (except Bridgeport and New Haven); Louisiana (New Orleans); Maine (Portland); Massachusetts (Boston); Minnesota; New Hampshire; New York (New York City); Pennsylvania (except Philadelphia and Pittsburg); South Carolina (Charleston).

For Teachers:

Alabama; Arizona (state-wide); California (state-wide); Colorado (Denver); Georgia (Atlanta); Maine (state-wide); Maryland (except Baltimore and Alleghany County); New York (state-wide); Oregon; Rhode Island (except Providence); South Carolina.

The contributions, viewed in themselves, offer rather a wide divergence among the several funds. Considered in connection with the benefits offered, the divergence is still wider. In four funds for which figures regarding the expected future payments were obtained, we find that in the case of the firemen's fund of Chicago, employees contribute 1 per cent of salaries, whereas benefits are worth 15.87 per cent of salaries; the Chicago police contribute 2 per cent of salaries, whereas benefits are worth 13.6 per cent of salaries; the Chicago male teachers contribute on the average 0.9 per cent of salaries, whereas benefits are on the average worth 0.93 per cent of salaries; and the Chicago female teachers contribute on the average from 1.5 to 1.6 per cent of salaries, whereas benefits on the average are worth 2.95 per cent of salaries. Stating these results in terms of dollars: For each \$100 contributed from salaries, there must be provided from other sources, if pensions will continue to be paid on the present basis:

For Chicago firemen ¹	\$1,487
For Chicago policemen ¹	630
For Chicago male teachers ¹	3
For Chicago female teachers ¹	87

These figures were compiled from the actual results found in our investigations of these funds, where the number of employees was large enough, and the pension experience long enough, to enable us to make an actuarial determination of the expected future payments. A comparison between these and the small funds with little or no pension experience can not be made.

SOURCES OF REVENUE—CONTRIBUTIONS FROM SOURCES OTHER THAN
SALARIES OF EMPLOYEES.

The public moneys appropriated in Illinois towards the pension funds, in no case, before the year 1915, took the form of a direct tax, but consisted of all, or part, of the moneys accruing from certain specified sources. In the year 1915 provisions were made by the Legislature for spreading a direct tax for the maintenance of the funds for firemen, Chicago policemen, park policemen (Act of 1915), and State teachers, and at the same session, it was made mandatory on the city of Chicago to contribute certain predetermined

¹ This applies only to employees who begin contributing when they begin their service. It does not take care of accrued liabilities on those who have years of service that count toward pension when they begin contributing.

amounts towards the maintenance of the Chicago municipal fund. In the case of the State teachers' act, this provision is in force without limitation of time. Under the acts for firemen and policemen, just mentioned, it is in force for a period of three years from July 1, 1915, and under the act for municipal employees of Chicago, for two years from January 1, 1916.

Regarding this provision there is an entire lack of harmony in the laws of this country. In some of the leading cities and in some cases where legislation is state-wide, moneys accruing from specified sources are diverted to pension purposes, whereas in other such instances provision is made for a direct tax.

Among those diverting money from specific sources may be mentioned:

For Firemen:

Colorado (Denver); Connecticut (New Haven); Kentucky (Louisville); Louisiana (New Orleans); Massachusetts (Boston); Minnesota (St. Paul, Minneapolis); Missouri (St. Louis); New Jersey; New York (New York City, Syracuse, Yonkers); Ohio; Oklahoma (all incorporated cities and towns); Pennsylvania (Pittsburg); Rhode Island (Providence); South Carolina (Charleston); Tennessee (Chattanooga); Texas; Washington; Wisconsin.

For Policemen:

California (state-wide, except Oakland); Colorado (Denver); Delaware (Wilmington); Nebraska (Omaha); Louisiana (New Orleans); Maryland (Baltimore); Michigan (Detroit); Nebraska; New York (New York City, Rochester); Ohio (Cincinnati, Columbus, Springfield); Oregon; Pennsylvania (Pittsburg); Rhode Island (Providence); South Carolina (Charleston); Washington (all first-class cities); Wisconsin.

For Teachers:

California (state-wide); Connecticut (New Haven, New London); Delaware (Wilmington); Maine (state-wide); Nebraska (Omaha); North Dakota; Ohio (state-wide); Oregon (districts of more than 10,000 children of school age); South Carolina (Charleston).

Among those spreading a direct tax may be mentioned:

For Firemen:

Colorado (Denver); Indiana (first- and second-class cities; optional to others); Kentucky (Louisville); Minnesota (Minneapolis); Ohio; Washington.

For Policemen:

Colorado (cities over 100,000); Indiana (Indianapolis); Iowa (state-wide); Kentucky (all first-class cities); Minnesota; Ohio (except Springfield).

For Teachers:

Colorado (Denver); Indiana (cities over 20,000); Massachusetts (Boston); Minnesota (cities of 10,000 and over).

Among those providing both for the diversion of moneys accruing from specific sources and for a direct tax may be mentioned:

For Firemen:

Colorado (Denver); Kentucky (Louisville); Minnesota (Minneapolis); Ohio; Washington.

For Policemen:

Colorado (cities over 100,000); Iowa; Kentucky (all first-class cities).

SOURCES OF REVENUE—COMBINATION OF ALL SOURCES.

Obviously if a fund is to remain solvent, the amounts in the fund at any specified time, together with those to be received from all sources, must be sufficient at all times to meet the disbursements provided for in the act. In no case in this State has any provision been made to preserve this balance.

In several funds of other states the same condition exists, no provision for solvency being made. Among these may be mentioned:

For Firemen:

Colorado (Denver); Connecticut (New Haven); Indiana; Kentucky (Louisville); Louisiana (New Orleans); Missouri (St. Louis); New Jersey; New York (New York City, Syracuse, Yonkers); Ohio; Oklahoma (all incorporated cities and towns); Pennsylvania; South Carolina (Charleston); Tennessee; Texas; Utah; Virginia; Washington; Wisconsin (all first-class cities).

For Policemen:

Connecticut (Bridgeport); Delaware (Wilmington); Indiana (Indianapolis); Iowa; Kentucky (all first-class cities); Louisiana (New Orleans); Minnesota; Nebraska; New York (Rochester); Ohio (except Springfield); Oregon (cities over 50,000); Rhode Island (Providence); South Carolina (Charleston); Virginia (Richmond); Washington (all first-class cities); Wisconsin (all first-class cities).

For Teachers:

Colorado (Denver); Delaware (Wilmington); Indiana (cities over 20,000); Kentucky (all first-class cities); Louisiana (New Orleans); Maine (state-wide); Massachusetts; Michigan (Detroit); Minnesota (cities of 10,000 and over); Missouri (St. Louis); Nebraska (Omaha); New Jersey; North Dakota; Ohio; Oregon (districts having more than 10,000 children of school age); Pennsylvania; Rhode Island (Providence); South Carolina (Charleston); Utah (state-wide); Washington; Wisconsin.

In contrast to the lack of any provision in this State for maintaining the solvency of a fund, are the provisions in the laws of several other states providing specifically for the preservation of the fund. In the cases of the following funds, among others, it is provided that some public authority, designated in each instance, shall contribute the amount or balance necessary to pay the pensions promised.

For Firemen:

California (state-wide); Connecticut (Bridgeport); Georgia (Atlanta); Maryland (Baltimore); Massachusetts; Michigan (Grand Rapids, Detroit); Minnesota (St. Paul); New Hampshire; North Dakota; Rhode Island (Providence).

For Policemen:

California (Oakland); Georgia (Atlanta); Maryland (Baltimore); Massachusetts; Michigan (Detroit); New Hampshire (state-wide); New York (New York City); Ohio (Springfield).

For Teachers:

Arizona; Georgia (Atlanta); Kansas (cities of first class); Maryland (Alleghany County); Massachusetts (except Boston); New York (except New York City, Rochester and Buffalo); Rhode Island (except Providence).

LIMITATIONS OF PAYMENTS BY EMPLOYEES.

In all Illinois funds, with the exception of the one for State teachers, to which payments cease when the sum of \$400 has been

contributed, deductions are made from salaries from date of entrance into service to date of pension without regard to the number of years of service. In the case of policemen in cities of from 9,000 to 50,000 inhabitants, deductions are also made from pensions.

In the case of State teachers and Chicago teachers, a minimum amount must be paid as a requirement for a service pension; in the one \$400, in the other \$450. In the case of the municipal employees of Chicago, if the sum of \$480 is not contributed at the time of entrance to a service pension, the balance with 5 per cent interest is deducted from the pension in equal amounts during the first three years following the granting of such pensions.

In the case of public library employees, the minimum amount required is the equivalent of five years' contributions. In no other fund is a minimum amount in contributions required from an employee as a condition for a service pension.

In the case of the State teachers, the sum of \$400 must be paid into the fund as a condition for a disability pension. In no other fund is any stated amount required as a condition for a disability pension.

REFUNDS.

In the Illinois acts for firemen, all police acts, and the act for fire insurance patrolmen, there is no provision for refund to the employee in the event of separation from service before becoming entitled to pension. In the others the provisions are as follows:

Beneficiaries.	Provisions for refund.
County employees.	In case of abolition of position, full amount contributed with 3 per cent interest.
Municipal employees of Chicago.	In case of abolition of position, full amount contributed. In case of separation from service for any other cause, one-half of amount contributed.
Public school employees.	In case of resignation or dismissal before serving 10 years, one-half of amount contributed.
Public library employees.	In case of resignation or dismissal, one-half of amount contributed.
Houses of correction employees.	In case of resignation or dismissal after serving 3 years, one-half of amount contributed.
State teachers.	In case of ceasing to teach before serving 15 years, one-half of amount contributed.
Chicago teachers.	In case of dismissal, full amount contributed. In case of resignation before serving 15 years, one-half of amount contributed.
Peoria teachers.	Same as in case of Chicago teachers.

Without exception, pension acts in the United States that do not provide for contributions from salaries of employees, make no provision for any payment to employees upon separation from active service on account of resignation or dismissal; and in those cases where such contributions are required, the payment never exceeds the amount contributed by the employee. This would imply that it is recognized as a principle, either that pensions do not tend to lower salaries, or that any reduction in salaries due to the promise of pension is fully compensated for by the benefits and protection afforded the employee while in service.

It seems to be a general plan in all states where contributions are required from employees, that in the various acts for firemen and policemen, no provision is made for refund or payment upon resignation or dismissal, whereas in the acts for teachers and other employees, such provision is made.

Among the cases where refunds are made to firemen and policemen are:

State and city.	Beneficiaries.
Maine (Portland)	Firemen.
Ohio (all cities)	Firemen and, with exceptions, policemen.

In these instances the amount to be refunded is left to the discretion of the board or determined by local by-laws.

Among the cases where refunds are not made to teachers are:

Connecticut (New London); Nebraska (Omaha); New York (except New York, Buffalo and Rochester); Rhode Island; South Carolina (Charleston); Vermont (state-wide); Virginia (state-wide).

In the several states, the variations in amounts or proportion of contributions refunded, and in numbers of years of service before which or after which refunds are permitted, are as wide as in our own State; and the several provisions compared with those of a fund for like employees in our State exhibit a rather close similarity.

CONDITIONS FOR PENSIONS—SERVICE; AGE.

The Illinois acts relating to firemen, the several police, the county employees, and the employees of the houses of correction require a minimum length of service of 20 years for eligibility to service pension; the act for fire insurance patrolmen, 22 years; and the three acts for teachers, 25 years, the last 15 of which must be spent in the public schools to which the act in question relates.

The act relating to the municipal employees of Chicago requires a minimum length of service of 20 years, except in the case of Civil War veterans, who may retire after 10 years of service upon reaching the age of 65.

The acts relating to firemen, Chicago policemen, policemen in cities of 50,000 or more inhabitants, park policemen (Act of 1913), employees of houses of correction, Chicago teachers and Peoria teachers do not prescribe a minimum age for retirement on service pension. The acts relating to policemen in cities of 9,000 to 50,000 inhabitants, park policemen (Act of 1915), fire insurance patrolmen and State teachers prescribe an age limit of 50 years.

The acts for municipal employees of Chicago and county employees prescribe an age limit of 55, with the qualification that, upon completion of 20 years of service, the employee may retire from service and, by continuing payments into the fund, become eligible for pension at age 55.

The provisions for pension, because of length of service and age, in some of the laws of other states are as follows:

FIREMEN.

State and city.	Length of service and age.
Alabama (cities of 25,000 to 50,000).	After 20 years of service in police or fire department, if 50 years of age.
Alabama (cities of over 25,000).	After 25 years of service in police or fire department, if 60 years of age.
California (except Oakland).	After 20 years of service, if 60 years of age.
Colorado (Denver).	After 20 years of service, if 50 years of age.
Connecticut (Bridgeport).	After 20 years of service.
Georgia (Atlanta).	After 20 years of continuous service, if 60 years of age.
Indiana.	After 25 years of service.
Iowa.	After 22 years of service, the last 5 continuous.
Louisiana (New Orleans).	After 15 years of service, if 60 years of age.
Maine (Portland).	After 15 years of service, if 60 years of age.
Maryland (Baltimore).	After 20 consecutive years of service.
Massachusetts (Boston).	After 25 years of service, if 55 years of age, if member requests.
	After 15 years of consecutive service, board may retire.
Massachusetts (cities other than Boston).	In cities, after 25 years of service, if 60 years of age, if member requests.
	In towns, after 25 years of continuous service, if 60 years of age, members may be retired.
Minnesota (St. Paul).	After 20 years of service, if 50 years of age, and a member of the association for 10 years.
Missouri (St. Louis).	After 15 years of service, if 60 years of age.
New York (New York City).	After 20 years of service, on request, or at discretion of fire commissioner.
Pennsylvania (Pittsburg).	After 20 years of service.
Pennsylvania (Philadelphia).	After 20 years of service.
Rhode Island (Providence).	After 65 years of age.

POLICEMEN.

State and city.	Length of service and age.
Alabama (cities of 25,000 to 50,000).	After 20 years of service, if 50 years of age.
Alabama (cities of over 25,000).	After 25 years of service, if 60 years of age.
California (except Oakland).	After 20 years of service, if 60 years of age.
Colorado (cities over 100,000).	After 60 years of age. After 25 years of service.
Connecticut (Bridgeport).	After 20 years of service.
Delaware (Wilmington).	After 25 years of service.
Georgia (Atlanta).	After 35 years of continuous service.
Indiana (all cities of first- and second-class, and all other cities accepting).	After 20 years, but before 25 years; after 25 years or more.
Iowa (state-wide).	After 22 years of service, the last 5 continuous, if 55 years of age.
Maine (Portland).	After 20 years of service, if 65 years of age.
Maryland (Baltimore).	After 16 years of service.
Michigan (Detroit).	After 25 years of active service.
Minnesota (except Minneapolis).	After 20 years of service, if 50 years of age.
Minnesota (Minneapolis).	After 20 years of service, if 55 years of age.
Minnesota (St. Paul).	After 20 years of service, if 50 years of age.
Nebraska (all metropolitan cities).	After 20 years of service, if 50 years of age.
Nebraska (Omaha).	After 20 years of service, if 50 years of age.
New Hampshire (state-wide).	After 25 years of service in district.

POLICEMEN—Concluded.

State and city.	Length of service and age.
New Jersey (all cities other than first-class—Acts of 1912).	After 20 years of service, if 60 years of age; after 25 years of service, if 55 years of age.
New Jersey (park police—Acts of 1910).	After 20 years of service, if 60 years of age.
New Jersey (all cities—Acts of 1885, Ch. 148).	After 20 years of service, if 60 years of age.
New Jersey (all cities accepting provisions—Acts of 1885, Ch. 250).	After 20 years of service, if 60 years of age.
New Jersey (state-wide—Acts of 1908).	After 20 years of service, if 65 years of age.
New Jersey (Elizabeth).	After 20 years of service, if 60 years of age; after 25 years of service, if 55 years of age.
New Jersey (Newark).	After 20 years of service, if 60 years of age.
New York (New York City).	After 20 years of service, if 55 years of age, may be retired on request. After 25 years of service if 55 years of age, must be retired on request. After 60 years of age, may be retired. Veterans of Civil War after 20 years of service or after reaching age 60 must be retired.
New York (Rochester).	After 20 years of service.
Ohio (Cincinnati).	After 25 years of continuous service, if 55 years of age.
Ohio (Columbus).	After 25 years of service.
Ohio (Springfield).	After 20 years of service.
Oregon (all cities of over 50,000).	After 20 years of service, if 50 years of age.
Pennsylvania (Philadelphia).	After 20 years of service, if 50 years of age, member may retire; after 20 years of service member may be retired at discretion of police department at any age.
Pennsylvania (Pittsburg).	After 20 years of service in the city.
Rhode Island (Providence).	After 30 years of service in the department, if 60 years of age.
Washington (all first-class cities).	After 20 years of service, if 60 years of age.
Wisconsin (all second- and third-class cities, and Milwaukee).	After 22 years of service.

TEACHERS.

State and city.	Length of service and age.
Arizona (state-wide).	After 25 years of service within state.
California (state-wide).	After 30 years of service, 15 of which must have been in state, including the 10 immediately preceding retirement.
Colorado (Denver).	After 25 years of service, 15 of which must have been in district. Men must be at least 60 years of age, and women, 50.
Connecticut (New Haven).	After 30 years of service, the last 20 of which must have been in city.
Connecticut (New London).	After 30 years of service, 15 of which must have been in city.
Delaware (Wilmington).	After 30 years of service and 65 years of age. After 35 years of service, 20 of which have been in city.
Georgia (Atlanta).	After 35 years of continuous service.
Indiana (cities of 55,000 to 60,000 (Terre Haute)).	After 30 years of service, 18 of which must have been in city.
Indiana (cities of 20,000 to 100,000).	After 30 years of service, 18 of which must have been in district.
Indiana (cities of 100,000 and over (Indianapolis)).	After 25 years of service, 20 of which must have been in city.
Kansas (all first-class cities).	After 30 years of service, 15 of which must have been in a first-class city.
Kentucky (all first-class cities).	After 30 years of service in pensioning city.
Louisiana (Parish of Orleans (New Orleans)).	After 40 years of service.

TEACHERS—Concluded.

State and city.	Length of service and age.
Maine (state-wide).	After 25, 30 or 35 years of service, including 20 years of service in state schools, the last 15 of which immediately precede retirement, provided the applicant has reached the age of 60.
Maryland (Alleghany Co).	After 40 years of service.
Maryland (Baltimore).	After 35 years of service.
Michigan (Detroit).	After 30 years of service, of which 20 must have been in city, or after 25 years of service wholly in city.
Minnesota (Duluth).	After 30 years of service.
Minnesota (Minneapolis).	After 20 years of service.
Missouri (St. Louis).	After 35 years of service, or on request, or at discretion of board of education.
Nebraska (Omaha).	After 35 years of service, teachers may be retired; after 40 years, must be. In each case, 20 years of service in city is required.
New Jersey.	After 35 years of service, 20 of which are in state.
New York (New York City).	After 30 years of service and 65 years of age.
New York (Buffalo).	After 30 years of service for females and 35 for males, four-fifths of which must have been in city.
New York (Rochester).	After 30 years of service for females and 35 for males, 15 of which must have been in city.
New York (except above cities).	After 25 years of service, the last 15 of which must have been in the district.
North Dakota (state-wide).	After 25 years of service, 18 of which, including 5 immediately preceding retirement, must have been in state.
Ohio (state-wide).	After 30 years of service, 15 of which must have been in district.
Pennsylvania (Philadelphia).	After 30 years of service, 20 of which must have been in city, if applicant is 60 years of age.
Rhode Island (state-wide).	After 35 years of service, 25 of which must have been in state, including the last 15 years.
Rhode Island (Providence).	After 35 years of service for males and 30 years for females, the last 20 years of which in each case must have been in city.
South Carolina (Charleston).	After 25 years of service, if 65 years of age and "in need of maintenance."
Utah (state-wide).	After 30 years of service, 10 of which are in city or state, provided applicant has reached age of 60.
Vermont (state-wide).	After 25 years of service entirely in state, or 30 years of service, 20 of which must have been in state.
Virginia (state-wide).	After 30 years of service in state; men must be 58 years of age; women, 50 years of age.
Washington (state-wide).	After 30 years of service, 15 of which are in state, for males; after 25 years of service, 15 of which are in state, for females.
Wisconsin (state-wide).	After 25 years of service, 18 of which must have been in state.
Wisconsin (Milwaukee).	After 25 years of service, 15 of which must have been in city.

By summarizing the information in these tables we arrive at the following:

For firemen, in 11 of the 19 cases mentioned, there are prescribed both a period of service such as 20 or 25 years and a minimum age for retirement such as 50 or 60 years. Of the remainder, 7 prescribe only a period of service, while 1 prescribes an age limit only.

For policemen, in 24 of the 36 cases mentioned, there are prescribed both a period of service and a minimum age for retirement. The periods of service vary from 16 to 35 years and the minimum age limit from 50 to 65 years. Excluding the two cases where alternative exist: In 7 cases, the age limit of 50 is prescribed; in 4 cases, 55 years; in 9 cases, 60 years; and in 2 cases, 65 years.

For teachers, in only 9 of the 38 cases mentioned are both a period of service and a minimum age for retirement prescribed. The period of service, however, is as a rule longer than that required of firemen and policemen. In fact in only 1 of the 38 cases mentioned is a service pension granted for fewer than 25 years of service, and in 28 cases, there are required 30 or more years of service.

CONDITIONS FOR PENSION—DISABILITY.

Under the Illinois acts for firemen and fire insurance patrolmen, pension is awarded at any time if physical or mental disability renders retirement from active service necessary. Under the several police acts, pension is awarded at any time if disability occurs as a result of injuries received in performance of duty; and in all cases, except that of policemen in cities of not less than 9,000 nor more than 50,000 inhabitants, if the policeman becomes insane after 10 years of service. Under the act for houses of correction employees, pension is awarded upon disability after 3 years of contribution to the fund. In other cases, pensions are awarded upon disability after the following years of service:

Municipal employees of Chicago.....	5 years.
County employees	5 years.
Public school employees	10 years.
Public library employees	10 years.
State teachers	15 years.
Chicago teachers.....	15 years.
Peoria teachers.....	15 years.

In the last three mentioned, service may have been rendered in any public school of the United States, provided that at least 9 of such years have been spent in public school service in the territory covered by the act.

It is common to practically all funds in this country for firemen and policemen that a pension is granted at any time if disability is incurred in line of duty. The one exception to this that has come to our attention is in the case of the Atlanta, Georgia, police fund, where disability is recognized after 20 years of continuous service.

In some instances a pension is granted to members of the fire and police departments if injury is received in a way other than in performance of duty. Some examples are the following:

For Firemen:

Louisiana (New Orleans); Maryland (Baltimore—at discretion of board); Massachusetts (Boston); Minnesota (St. Paul—except as a result of immoral habits); Missouri (St. Louis); New York (New York City); Wisconsin (first-class cities—after 10 years of service).

For Policemen:

Delaware (Wilmington—after 15 years of service); Iowa (after 5 years of service); Massachusetts (all cities over 75,000—after 20 years of serv-

ice); New York (New York City—after 10 years of service); Ohio (Cincinnati—after 15 years of continuous service); Pennsylvania (Philadelphia—10 years of service); Virginia (Richmond).

For Teachers:

In the case of teachers, a pension is awarded upon disability under nearly all funds. The years of service before disability is recognized, however, vary widely. The following are some of the provisions:

State and city.	Length of service and age.
California (state-wide).	After 15 years of service in state.
Colorado (Denver).	After 10 years of service in district.
Connecticut (New Haven).	After 15 years of service, the last 10 in city.
Connecticut (New London).	After 25 years of service, 15 of which were in city.
Delaware (Wilmington).	After 20 years of service, 15 of which were in city.
Georgia (Atlanta).	After 20 years of service.
Indiana (cities of 55,000 to 60,000 (Terre Haute)).	After 20 years of service, the last 12 in city.
Indiana (cities of 20,000 to 100,000).	After 20 years of service, the last 12 in district.
Indiana (Indianapolis).	After 15 years of service in city.
Kansas (all first-class cities).	After 25 years of service, 15 of which were in a first-class city.
Kentucky (all first-class cities).	After 20 years of service in pensioning city.
Louisiana (Parish of Orleans (New Orleans)).	After 10 years of service.
Maryland (state-wide).	After 25 years of service, if 60 years of age and without the means of "comfortable support."
Maryland (Alleghany Co.).	After 20 years of service.
Maryland (Baltimore).	After 20 years of service in city.
Michigan (Detroit).	After 20 years of service, 10 of which were in city.
Minnesota (Duluth).	After 20 years of service.
Nebraska (Omaha).	After 25 years of service, 20 of which were in city.
New York (New York City).	After 20 years of service, 15 of which must have been in city.
New York (Buffalo).	After 20 years of service for females and 25 for males, four-fifths of which must have been in city.
New York (Rochester).	After 20 years of service for females and 25 for males, 15 of which must have been in city.
New York (except above cities).	After 15 years of service, last 9 of which were in district.
Ohio (state-wide).	After 20 years of service, 10 of which were in district.
Pennsylvania (Philadelphia).	After 5 years of service. Board of retirement may at its discretion grant full annuity to disabled teachers after 30 years of service, 20 of which were in city.
Rhode Island (Providence).	After 10 years of service in city.
South Carolina (Charleston).	After 20 years of service in city.
Utah (state-wide).	After 20 years of service; but if disability ceases, pension is stopped unless pensioner has reached 60 years of age.
Virginia (state-wide).	After 20 years of service in state.
Wisconsin (state-wide).	After 18 years of service in state.
Wisconsin (Milwaukee).	After 15 years of service in city (contributions for 15 years must have been paid).

From this table it may be noted that the period of service required for a disability pension varies from 5 to 25 years but that 20 years or more are required in 20 of the 30 cases mentioned.

For Other Employees:

In the case of state, county and municipal employees, pension is awarded upon disability incurred in line of duty at any time, in the following cases:

State and city.	Beneficiaries.
New Jersey (state-wide).	Health officers.
New York (New York City).	Street cleaning department employees.
New York (New York City).	Health officers.

In the case of state, county and municipal employees, pension is awarded, after varying periods of service, upon disability not incurred in line of duty, in the following cases:

State and city.	Beneficiaries.	Length of service.
Nebraska.	Public library employees.	After 20 years of service.
New Jersey.	Health officers.	After 25 years of service.
New York.	Street cleaning department employees.	After 10 years of service.

AMOUNT OF PENSION PER YEAR.

Under the Illinois laws for firemen and fire insurance patrolmen, the amount of pension, either because of service or disability, is one-half of salary at date of retirement. In the several police funds, the amount of service pension is one-half of salary attached to rank or position held for at least one year immediately prior to retirement, with limitations; for disability pensions, one-half of salary at date of retirement, with limitations. In the cases of the houses of correction employees, municipal employees of Chicago and county employees, the pension is \$600 per annum. For public library and public school employees, the amounts of pension are determined by the board of trustees, the only requirement being that such shall not exceed \$600. For Illinois State teachers, because of service, \$400; because of disability, \$16 for each year of service, not to exceed \$400; for Chicago school teachers, because of service, \$400—because of disability, an amount proportional to the sum contributed as related to the sum of \$450; for Peoria teachers, because of service, not to exceed \$400—because of disability, a sum proportional to the amount contributed as related to the sum of \$400.

For Firemen:

In the case of firemen in other states and cities, the majority pay in service pension one-half of annual salary at time of retirement, without limitation. Among these may be mentioned:

Alabama (cities of 25,000 to 50,000—Gen. Laws of 1911; all cities over 25,000); California (state-wide, except Oakland); Colorado (Denver); Iowa (mandatory on cities having a paid department; permissive on cities having an organized department); Louisiana (New Orleans); Maryland (Baltimore); Michigan (Detroit); New Jersey (all first-class cities accepting act; all municipalities, other than those of the first class, having paid fire departments); New York (New York City, Syracuse); Oklahoma (all in-

corporated cities and towns); Pennsylvania (Pittsburg); Tennessee (Chattanooga); Wisconsin (all cities of the first, second, third and fourth classes).

Among those firemen's funds where some other plan is employed, or some limitation imposed on the amount of service pension are:

State and city.	Amount of pension.
Connecticut (New Haven).	One-fourth to one-half of annual salary at time of retirement.
Georgia (Atlanta).	One-half of annual salary at time of retirement; not exceeding \$50 monthly for retirement after 20 years of service; not exceeding \$100 after 35 years of service.
Indiana (all first- and second-class cities, and all third-, fourth- and fifth-class cities which accept the act).	After 25 years of service, \$20 to \$40 monthly; after 20 years of service, \$15 to \$30 monthly.
Maine (Portland).	Not to exceed one-half of annual salary at time of retirement.
Michigan (Grand Rapids).	One-half of annual salary at time of retirement, not to exceed \$450.
Minnesota (cities of 50,000 or over).	To be fixed by local by-laws, not to exceed \$40 monthly.
Minnesota (St. Paul).	After 20 years of service and 50 years of age, \$480 annually.
Minnesota (Minneapolis).	If retired because of age (or total disability), \$480.
Nebraska (all metropolitan and first-class cities).	One-half of annual salary at time of retirement, not over \$50 monthly.
New Hampshire.	\$500 based on 25 years of service, in no case less than \$100.
North Dakota.	Determined by local by-laws, not to exceed \$40 monthly.
Ohio (all cities and towns having a fire department supported in whole or in part at public expense).	Determined by local by-laws.
Ohio (Dayton).	\$40 monthly.
Ohio (Cleveland).	Eleven-sixteenths of salary at time of retirement based on 30 years of service, not exceeding \$1,200, except in case of chief and two assistants.
Pennsylvania (Philadelphia).	One-half of average annual salary for a period of 2 continuous years.
Rhode Island (Providence).	One-half of average annual salary at retirement, if above rank of assistant foreman; all others receive a sum not exceeding \$600.
South Carolina (Charleston).	One-half of annual salary, not less than \$120 annually.
Texas.	One-third of pay at time of retirement.
Virginia.	Determined by local authorities.
Washington (all cities and towns).	One-half of pay based on last year.

In practically all the above cases, the same pension is awarded because of disability.

For Policemen:

Among the police funds which pay in service pensions one-half of annual salary at time of retirement, without limitation, are the following:

Alabama (cities over 25,000; cities from 25,000 to 50,000); California (Oakland); Colorado (Denver); Connecticut (Bridgeport); Delaware (Wilmington); Maine (Portland); Maryland (Baltimore); Michigan (Detroit); New Jersey (all cities other than first class; Elizabeth; Newark); Ohio (Springfield); Oregon (cities of over 50,000); Pennsylvania; Pennsylvania (Pittsburg); South Carolina (Charleston); Washington (all first-class cities); Wisconsin (Milwaukee).

The following police funds are among those which follow some other plan, or impose some limitation on the provision for payment of one-half annual salary at time of retirement on service pension:

State and city.	Amount of pension.
Connecticut (all cities having police department under police commission, which shall accept it).	One-fourth to one-half of annual salary at time of retirement for patrolmen, not to exceed \$500; for others than patrolmen, one-half of annual salary at time of retirement.
Connecticut (New Haven).	One-fourth to one-half of annual salary at time of retirement.
Georgia (Atlanta).	One-half of annual salary at time of retirement, not to exceed \$100 monthly.
Indiana (cities of first and second class, and all other cities accepting).	After 20 years of service, \$360; after 25 years of service, \$600.
Iowa (state-wide).	One-half of annual salary at time of retirement, if an organized department; such sum as board may fix, if a paid department.
Louisiana (New Orleans).	Not over \$150 annually.
Minnesota (state-wide).	Fixed by local by-laws, not exceeding \$40 monthly.
Minnesota (Minneapolis, St. Paul).	\$40 monthly.
Nebraska (all metropolitan cities; Omaha).	\$50 monthly.
New Hampshire (state-wide).	\$500 annually based on 25 years of service.
New York (New York City, Rochester).	Not less than one-half salary at time of retirement.
Ohio (all cities and towns having police departments or sanitary police departments supported in whole or in part at public expense).	Determined by local by-laws.
Ohio (Cincinnati).	\$600 annually.
Ohio (Columbus).	After 25 years of service, \$480 if retired on own request; \$600 if retired by chief.
Pennsylvania (second-class cities).	Determined by local authorities.
Pennsylvania (Philadelphia).	Two and one-half per cent of average annual salary for 10 years preceding retirement (\$3,000 taken as highest annual salary), multiplied by years of service, not exceeding 20 years.
Rhode Island (Providence).	Determined by Board of Police Commissioners.
Virginia (Richmond).	\$360 annually.

In practically all the above cases, the same pension is awarded because of disability.

For Teachers:

In none of the states is the teachers' service pension one-half of the annual salary at time of retirement, without limitation. Some of the provisions, for service and disability pensions are as follows:

State and city.	Amount of pension.
Arizona.	A flat rate of \$600 annually for all annuitants.
California.	\$500 annually, based on 30 years of service. Teachers retiring after 15, and before 30, years of service receive a proportionate annuity.
Colorado (Denver).	Not more than \$480 annually for 25 years of service.
Connecticut (New Haven).	One-half of average annual salary for last 5 years of service, not less than \$400 nor more than \$800.
Connecticut (New London).	One-half of average annual salary for last 5 years.
Delaware (Wilmington).	\$400, based on 35 years of service.

State and city.	Amount of pension.
Georgia (Atlanta).	One-half of salary at time of retirement, not to exceed \$50 per month for 20 years of service, or \$100 per month for 35 years. \$600 annually, based on 30 years of service.
Indiana (cities of 20,000 to 100,000; cities of 55,000 to 60,000; Terre Haute).	\$600 annually, based on 40 years of service.
Indiana (Indianapolis).	\$500 annually, based on 30 years of service.
Kansas (first class cities).	Teachers retiring after 25 years of service receive a proportionate annuity. \$400 annually, based on 40 years of service. Teachers retiring after 20 years, but before 40 years, of service, receive a proportionate annuity.
Kentucky (first class cities).	One-half of average annual salary for last 5 years, in no case to be less than \$300 nor more than \$600. Teachers retiring after 10 years, but before 40 years, of service, receive amount proportionate to years served.
Louisiana (Parish of Orleans (New Orleans)).	\$250 annually, based on 35 years of service, and lesser amounts arbitrarily fixed for 30 and 25 years of service. Special half-rate pensions are provided for teachers who retired from service previous to act.
Maine.	A flat rate of \$200 annually for all annuitants.
Maryland.	One-half of average annual salary for last 5 years of service, not to exceed \$400 nor be less than \$200. Teachers retiring after 20 years, but before 40 years, of service, shall receive amount proportionate to years served.
Maryland (Alleghany Co.).	\$600 annually, based on 35 years of service. A minimum of \$360 is established, and between the two the annuity is one-half the average annual salary for last 5 years of service.
Maryland (Baltimore).	Retirement allowance consists of two parts, annuity and pension. Annuity to be such as can be purchased by contributions of member with compound interest. Pension to be of equal amount.
Massachusetts (except Boston).	Such annuity as fund will allow and as board of trustees may determine. (In 1913, this was \$180.)
Massachusetts (Boston).	\$400 annually, based on 30 years of service, of which 20 must have been in city, or after 25 years of service wholly in city. No fixed provision.
Michigan (Detroit).	\$500, based on 30 years of service.
Minnesota (cities of 10,000 or more population).	\$500, based on 30 years of service, 10 years of which must have been in city. Teachers retiring after 20 years, and before 30 years, receive a proportionate annuity.
Minnesota (Duluth).	\$180, based on 35 years of service.
Minnesota (Minneapolis).	\$500, based on 35 years of service. Teachers retired after 25, and before 35, years of service, receive a proportionate annuity.
Missouri (St. Louis).	One-half of average annual salary for last 5 years of service, not less than \$250 nor more than \$600.
Nebraska (all metropolitan cities).	One-half of annual salary at time of retirement, not less than \$600.
New Jersey (state-wide).	One-half of annual salary at time of retirement, not to exceed \$800.
New York (New York City).	One-half of annual salary at time of retirement, not to exceed \$600.
New York (Rochester, Buffalo).	One-fiftieth of average annual salary for last 5 years of service multiplied by whole number of years of service, not to exceed \$750 annually or to be less than \$350 annually.
New York (except above cities).	
North Dakota.	

State and city.	Amount of pension.
Ohio.	\$12.50 for each year of service, not to exceed \$450.
Oregon (districts having more than 10,000 children of school age).	Discretionary.
Pennsylvania (Philadelphia).	One-half of salary at time of retirement, not less than \$400 nor more than \$1,000. Teachers retiring after 5 years, and before 30 years, of service, receive a proportionate annuity.
Rhode Island.	One-half of average annual salary for last 5 years of service, not to exceed \$500.
Rhode Island (Providence).	One-half of salary at retirement, not to exceed \$600.
South Carolina (Charleston).	One-half of salary at time of retirement, not to exceed \$250.
Utah (state-wide).	One-half of average annual salary for last 5 years of service, not to exceed \$600. Teachers retiring after 20 years of service, and before 30 years, receive a proportionate annuity.
Vermont.	One-half of average annual salary for last 5 years of service, not to exceed \$500.
Virginia.	One-half of average annual salary for last 5 years of service, not to exceed \$500.
Washington.	One-half of average annual salary during last 5 years of service, not to exceed \$600.
Wisconsin.	\$12.50 for each year of service, not, however, to exceed \$450 in any one year.
Wisconsin (Milwaukee).	A flat rate of \$400 for all annuitants.

PROVISIONS FOR DISCONTINUANCE OF PENSION.

In Illinois, pension terminates when disability ceases in the following cases:

Firemen, policemen, houses of correction employees, municipal employees of Chicago, public library employees, public school employees, Illinois state teachers and county employees.

In some of these instances the further requirement of submitting to physical examination is added. The police acts contain the additional provision that in case of either service or disability pension, pension ceases if pensioner is convicted of felony or becomes a habitual drunkard, or a nonresident of this State in some instances, and of the United States in others. In the acts for Chicago teachers, Peoria teachers and fire insurance patrolmen, no provisions are made for discontinuance either of service or disability pension.

Among the acts in other states it is common to find regulations providing for termination of pension upon conviction for felony, habitual drunkenness, or leading an immoral life. In some instances pensions may be revoked upon failure to provide for family.

WIDOWS OF EMPLOYEES—CONDITIONS FOR PENSION; AMOUNT OF PENSION PER YEAR.

Of the 15 Illinois acts under consideration, 8 provide for pensions to widows, 1 provides for payment to widows of employees who

were not pensioners at time of death, and 6 make no provisions of any description for widows.

The acts that provide pensions to widows are those for :

Firemen, policemen (all), fire insurance patrolmen and houses of correction employees.

The act that provides for payments to widows of employees at death of husband is that for :

Public library employees.

The acts that make no provision for widows are those for :

County employees, municipal employees of Chicago, public school employees, Illinois state teachers, Chicago teachers and Peoria teachers.

In the case of firemen, the widow of an employee who dies while in service or on pension is entitled to pension, the only restriction being that in the case of the widow of a pensioner, she must have been married to him before the date of his retirement on pension. The provisions in the act for fire insurance patrolmen are similar, except that there is no restriction in any event as to date of marriage.

In the several police funds, a pension is granted to widows :

1. Whose husbands were either service or disability pensioners.
2. Whose husbands lost their lives while in the performance of duty.
3. Whose husbands died while in service after at least 10 years of service.

For groups 1 and 3 above, there are restrictions in most funds, varying among the several funds, regarding dates of marriage. These are by no means uniform.

In the case of library employees, death benefits, not to exceed one year's benefit, are paid to the widows of employees who die while in active service, but not to the widows of pensioners. In the act for houses of correction employees, a pension is granted to a widow whose husband was either a service or disability pensioner, or died while a contributor, provided marriage took place at least 5 years before his death and prior to retirement in the case of a service pensioner or 5 years before death in the other cases.

In the acts providing for pensions to widows, the provisions for amounts to be paid per year are as follows :

Beneficiaries.	Amount of pension.
Firemen.....	\$540.
Policemen (all).....	Same amount as was paid to husband or would have been paid to him had he become the pensioner instead of her.
Fire insurance patrolmen.....	\$360.
Houses of correction employees.....	\$600.

In the acts in force in other states, the provisions of several for pensions or payments to widows of firemen and policemen are given in the following table :

FIREMEN.

State and city.	Amounts of pension and conditions for pension.
California (state-wide).	If death of husband occurs in line of duty, a pension of one-third salary. If death occurs from other causes after 10 years of service, \$1,000.
California (Oakland).	Same as above, except one-half instead of one-third salary.
Colorado (cities over 100,000).	If death of husband occurs in line of duty, or while in service or on retired list from any cause, \$30 monthly.
Connecticut (New Haven).	If death of husband occurs in line of duty, a sum not exceeding \$2,000.
Indiana (all first- and second-class cities, and all third-, fourth- and fifth-class cities which accept act).	If death of husband occurs in service or after retirement, \$20 to \$25 monthly.
Iowa (mandatory on cities having a paid department; permissive on cities having an organized department).	In event of death of member in city department in line of duty, widow receives \$20 monthly. In towns, pension to be determined by board.
Kentucky (all first-class cities).	If death of husband occurs in line of duty or from any cause, after 15 years of service, \$30 monthly.
Maine (Portland).	If death of husband occurs in line of duty, a sum not to exceed \$25 monthly.
Maryland (Baltimore).	If death of husband occurs in line of duty, widow receives annually one-half of annual salary at time of death.
Massachusetts (Boston).	If death occurs in line of duty, widow or children under 16 years of age may receive annuity of not over \$300 from the city and a further sum of \$1,000 from the state.
Michigan (Grand Rapids).	If death of husband occurs from injury received in line of duty within 1 year from date of injury, \$300 annually for 5 years.
Michigan (Detroit).	Under same conditions as Grand Rapids, \$300 annually.
Minnesota (cities of 50,000 and over).	If death of husband occurs in line of duty, such pension as local by-laws permit.
Minnesota (Minneapolis).	In event of death of members, an annuity of not over \$480, and a death benefit of \$125.
Nebraska (all metropolitan and first-class cities).	If death of husband occurs in line of duty, one-half of annual salary at time of death, not over \$50 monthly.
New Jersey (all first-class cities accepting act).	If death of husband occurs after 5 years of service or after retirement, one-half of salary at time of death or retirement.
New Jersey (all municipalities, other than those of the first class, having paid fire departments).	Same as above.
New Jersey (Jersey City).	In event of death, one-half of salary at time of death, paid annually.
New York (New York City).	In event of death in line of duty, not over one-half of pay at time of death, not exceeding \$1,000 annually to dependents; widows may receive \$600 if half of pay be less than that; in event of death from other causes, not over \$300 annually to dependents.
Ohio (Dayton).	If death of husband occurs in line of duty, \$25 monthly (while widow is unmarried). If death of husband occurs after 5 years of service from any cause except in line of duty, or self-abuse, widow and children receive the same annuities.
Ohio (Cleveland).	Upon death of husband, annuities of \$60 to \$300 according to length of service of husband.
Oklahoma (all incorporated cities and towns).	Upon death of husband, one-half of salary at time of death.
Pennsylvania (Pittsburg).	Upon death of husband (active member), \$1,000.
Pennsylvania (Philadelphia).	If death of husband occurs in line of duty, \$240 annually.
South Carolina (Charleston).	If death of husband occurs in line of duty, or after 20 years of service, 12 being consecutive, from any cause, a payment not less than \$50 nor more than \$100.
Tennessee (Chattanooga).	If death of husband occurs in line of duty, a payment of \$500.

FIREMEN—Concluded.

State and city.	Amounts of pension and conditions for pension.
Texas. Utah.	Upon death of husband, \$144 annually. If death of husband occurs in line of duty, a payment of \$2,500.
Washington (all cities and towns).	If death of husband occurs in line of duty, one-half of salary at time of death. If death results from natural cause, after 2 years of service, a payment of \$1,000.
Wisconsin (Milwaukee).	In event of death incurred in line of duty if after 10 years of service, dependents receive \$420 to \$720 annually according to rank of member, and each child under 18 years, \$72, the total amount not to exceed one-half of salary at time of death.

POLICEMEN.

State and city.	Amounts of pension and conditions for pension.
California (state-wide).	If death of husband occurs in line of duty, one-third of salary. If death results from natural causes after 10 years of service, \$1,000.
California (Oakland).	Same as above, except one-half of salary instead of one-third.
Colorado (cities over 150,000).	If death of husband occurs in line of duty, \$30 monthly.
Colorado (Denver).	If death of husband occurs in line of duty, \$30 monthly until marriage.
Connecticut (all cities having police department under police commission, which shall accept it).	If death of husband occurs in line of duty, not over \$300 annually.
Connecticut (New Haven).	If death of husband occurs in line of duty, a sum not exceeding \$2,000.
Indiana (all cities of first and second class, and all other cities accepting).	If death of husband occurs in line of duty, \$30 monthly.
Iowa.	If death of husband occurs in line of duty, \$20 monthly.
Kentucky (all first-class cities).	If death of husband occurs in line of duty, or from any natural cause after 15 years of service, \$30 monthly.
Louisiana (New Orleans).	If death of husband occurs in line of duty, or after 20 years of service from natural causes, not over \$150.
Maryland (Baltimore).	If death of husband occurs in line of duty, board to make reasonable provision.
Massachusetts (Boston).	In event of death in line of duty, \$300 annually to widow or children under 16 years of age.
Nebraska (all metropolitan cities).	If death of husband occurs at any time in line of duty, not less than \$20 monthly.
New Jersey (all cities other than first class—Acts of 1912).	If death of husband occurs in line of duty, one-half of annual salary at time of death.
New Jersey (park police—Acts of 1910).	Same as above.
New Jersey (all cities accepting provisions—Acts of 1885).	Same as above.
New Jersey (Newark).	Same as above.
New York (New York City).	To the dependent parents or widow, or children under 18 years of age of member dying as a result of injury received in performance of duty, a sum not exceeding \$600 annually is paid. If member dies after 10 years of service or while on pension, widow or children receive not over \$300 annually.
Ohio (Cincinnati).	If death of husband occurs in line of duty or after 15 years of service, or if an annuitant dies, \$240 annually. If an active member dies, the sum of \$100, if widow is entitled to annuity; the sum of \$300, if she is not entitled to annuity.

POLICEMEN—Concluded.

State and city.	Amounts of pension and conditions for pension.
Ohio (Columbus).	If death of husband occurs in line of duty or after 10 years of service, or if an annuitant dies, not over \$300 annually.
Ohio (Springfield).	Upon death of husband (an active member), \$24 annually.
Oregon (all cities over 50,000).	If death of husband occurs in line of duty, one-third of annual salary at time of death.
Pennsylvania (state-wide).	If death of husband occurs in line of duty, not more than one-half of annual salary at time of death.
Pennsylvania (Philadelphia).	If death of husband occurs within 60 days from date of injury received in line of duty, \$240 annually.
Pennsylvania (Pittsburg).	Death benefit of \$1,000.
Washington (all first-class cities).	If death of husband occurs in line of duty, one-third of annual salary at time of death. If death occurs from natural causes after 5 years of service, \$1,000.
Wisconsin (all second- and third-class cities).	If death of husband occurs in line of duty, or from natural causes after 10 years of service, one-third of salary at time of death.
Wisconsin (Milwaukee).	If death of husband occurs in line of duty, or from natural causes after 15 years of service, or if an annuitant dies, \$420 to \$900, according to rank.

In no case in the several teachers' acts in other states is provision made for pensions to dependents. In just one case are payments made upon the death of annuitant, this single instance being that of the Massachusetts teachers outside of Boston, to whom the payment consists of a return of contributions over amount paid in pension if death occurs before the total amount received in pension exceeds the amount contributed by the teacher.

WIDOWS OF EMPLOYEES—PROVISIONS FOR DISCONTINUANCE OF PENSION.

Under all Illinois acts where pension is granted to widows, such pension terminates if widow marries. In the cases of policemen in cities of 50,000 or over, policemen in cities of 9,000 to 50,000, and park policemen (Act of 1913), the widow is subject to the same provisions relating to termination of pension because of conviction of felony or habitual drunkenness, or because of nonresidence, as those imposed upon husbands.

NATURAL CHILD OR CHILDREN OF EMPLOYEES—CONDITION FOR PENSIONS; AMOUNTS OF PENSION PER YEAR; PROVISIONS FOR DISCONTINUANCE OF PENSION.

The eight Illinois acts that provide for pensions to widows also make provisions for pensions to children. In the acts for firemen and fire insurance patrolmen, children are pensioned upon the death of the father while in service or on pension, provided only in the case of service pensioners that marriage of father and mother took place before date of retirement. Children of those who were disability pensioners are not subject under these acts to this restriction.

Under the various police acts and the houses of correction act, the death of both father and mother is a condition for pension. In these acts, also, the children must be under 16 years of age. The other conditions are the same as those governing pensions to widows under the several acts.

In all the police acts, except that relating to policemen in cities of 9,000 to 50,000 inhabitants, provision is made for pensioning children under 16 years of age of a policeman who becomes insane after at least 10 years of service. If the father has not been taken outside the State, the same provisions apply in this case as apply in that of children of a policeman who dies after at least 10 years of service.

Under the act for firemen, each eligible child receives \$96 per year if the mother is living, and \$180 per year if the mother is dead. Under the several police acts, the family receives the same pension as was provided for father or mother, to be divided equally among the eligible children. Under the act for fire insurance patrolmen, each eligible child receives \$72 per year. Under the houses of correction act, \$600 per annum is divided equally among the eligible children in the family.

In all cases pension terminates when the child attains to 16 years of age. In some few of the acts are provisions for terminating the pension if the child is convicted of felony or habitual drunkenness, or marries.

The conditions for pension and the amounts received in pension by children in several of the firemen's and policemen's funds in other states are as follows:

FIREMEN.

State and city.	Amount of pension, and conditions for pension.
Colorado (Denver).	If death of father occurs in line of duty, or while in service or on retired list, from any cause, the sum of \$6 monthly to each child under 14 years of age.
Indiana (all first- and second-class cities, and all third-, fourth- and fifth-class cities which accept act).	If death of father occurs in service or after retirement, the sum of \$6 monthly to each child.
Kentucky (all first-class cities).	If death of father occurs in line of duty, or from any cause after 15 years of service, the sum of \$6 monthly to each child under 14 years of age.
Louisiana (New Orleans).	If death of father (an active member) occurs in line of duty, or after 1 year of service, the sum of \$72 annually to each child under 14 years of age.
Massachusetts (Boston).	See widows.
Minnesota (St. Paul).	Upon death of active member or pensioner, the sum of \$5 monthly to each child under 16 (total for family, including \$30 to widow, not to exceed \$40 monthly). In case of death of widow, children to receive such sum as board determines, not exceeding \$40 monthly.
Missouri (St. Louis).	Upon death of active member, the sum of \$72 annually to each child under 14 years of age.
Ohio (Cleveland).	Upon death of father, annuities of \$36 to \$84 to each child under 16 years of age.
Texas (state-wide).	Upon death of father, an annuity of \$36 to each child under 16 years of age.
Wisconsin (Milwaukee).	See widows.

POLICEMEN.

State and city.	Amount of pension, and conditions for pension.
Colorado (cities over 100,000).	If death of father occurs in line of duty, the sum of \$6 monthly to each child under 16 years of age.
Colorado (Denver).	If death of father occurs in line of duty, the sum of \$6 monthly to each child under 14 years of age.
Indiana (all cities of first and second class, and all other cities accepting).	If death of father occurs in line of duty, the sum of \$6 monthly to each child under 16 years of age.
Kentucky (all first-class cities).	If death of father occurs in line of duty, or from any natural cause, after 15 years of service, the sum of \$6 monthly to each child under 14 years of age.
New York (New York City).	See widows.
Ohio (Cincinnati).	If death of father occurs in line of duty, or after 15 years of service, or if an annuitant dies, the sum of \$72 annually to each child under 16 years of age.

OTHER DEPENDENTS OF EMPLOYEES.

In the Illinois act for firemen, provision is made whereby dependent parents receive \$300 each per annum if no widow or eligible children survive. In all the police acts, except that relating to cities of 9,000 to 50,000, the wife of a policeman who becomes insane after at least 10 years of service is pensioned under the same provisions as apply to the widow of a policeman who dies after at least 10 years of service. In the act for fire insurance patrolmen, the provisions relating to natural children apply also to adopted children. In the act for houses of correction employees, the mother of a deceased contributor, if no eligible widow or children survive, receives a pension of \$600 as long as she lives.

Some instances of similar provisions in the laws of other states are:

FIREMEN.

State and city.	Amount of pension, and conditions for pension.
California (Oakland).	If death occurs in line of duty, dependent parents receive one-half of annual salary at time of death, if no eligible widow or children survive. If death occurs from natural causes, after 10 years of service, they receive \$1,000, if no eligible widow or children survive.
Iowa (mandatory on cities having a paid department; permissive on cities having an organized department).	Dependent father or mother receives \$20 monthly, if no eligible widow or children survive, if death occurs in line of duty.
Kentucky (all first-class cities).	Dependent father and mother receive \$30 monthly, if member was unmarried and childless.
Ohio (Dayton).	Dependent parents receive \$25 monthly, if no eligible widow or children survive.
Ohio (Cleveland).	Dependents receive annuities of \$60 to \$300 according to length of service of member.
Pennsylvania (Philadelphia).	Dependent parents receive \$20 annually, if no widow survives.
Texas (state-wide).	Dependents receive \$144 annually.
Wisconsin (state-wide; Milwaukee).	Dependents receive \$420 to \$720 annually, according to rank of member.

POLICEMEN—Concluded.

State and city.	Amount of pension, and conditions for pension.
California (Oakland).	If member was killed in line of duty, dependent parents receive one-half of salary at time of death, if no eligible widow or children survive. If death occurred from natural causes, after 10 years of service, they receive \$1,000, if no eligible widow or children survive.
Colorado (cities over 100,000).	Dependent father and mother each receive \$15 monthly, if no eligible widow or children survive; if either parent is dead, the other receives \$30.
Colorado (Denver).	If member was killed in line of duty, his mother and father each receive \$6 monthly (monthly pensions also to widow and children).
Connecticut (New Haven).	Widow or dependents receive sum not exceeding \$2,000.
Indiana (all first- and second-class cities, and all other cities accepting).	If no eligible widow or children survive, other dependents receive \$20 monthly.
Iowa (state-wide).	Dependent parents receive \$20 monthly, if no eligible widow or children survive.
Kentucky (all first-class cities).	Dependent parents receive \$30 monthly, if no eligible widow or children survive.
New Jersey (Newark).	Widow or dependents receive one-half of salary of member at time of death.
Oregon (all cities over 50,000).	Widow or other dependents receive not more than one-third of annual salary at time of death of member.
Wisconsin (all second- and third-class cities).	Dependent parents receive widow's share of pension if no eligible widow or children survive.

ADDITIONAL DATA.

In no fund in Illinois is the financial condition of applicant to be taken into consideration in granting a pension. Thus, in this State it seems to be recognized as a principle that a pension is a reward for service rendered. Under the firemen's and policemen's acts in the state of Alabama, a pension can not be awarded to one possessing independent means of livelihood, but in no other instance in the United States is there a condition imposed regarding the need of the individual for pension.

Provisions regulating the investment of funds appear in all the acts. In four instances—namely, in the firemen's, the fire insurance patrolmen's, the public school employees' and the public library employees' acts—the funds may be invested at the discretion of the board. In all other cases they must be invested in certain specified classes of securities.

In the case of the policemen's fund of Chicago, provision is made for an actuarial determination each year of the amount needed to pay pensions currently and to provide a reserve on all entering the service after January 1, 1916. This is the only fund for which such a provision is made.

CHAPTER V.

ACTUARIAL REPORT.

GENERAL INTRODUCTION.

An actuarial investigation of the future costs of operating a pension system may be based either on statistical data collected from the experience of the particular fund to be examined, or it may be based on certain reasonable assumptions made as the result of experience with groups of persons somewhat similar to those involved as participants in the pension fund. In so far as the experience of a particular fund is adequate to justify conclusions, it is highly desirable that the actuarial results rest on rates of withdrawal and rates of retirement on pensions given by that experience. At least, this is the position taken in the present investigation.

Of the several funds in this State, three, by reason of the numbers of employees involved and the lengths of time since the laws were enacted, offer an experience sufficient to enable us to predict future costs relating to them almost entirely on the basis of statistical data from their own experience. They are the firemen's fund of Chicago, the police fund of Chicago and the Chicago school teachers' fund. In what follows these are considered in detail, and in each case there are presented monetary tables showing the amounts that may be expected to be paid each year if the present plans of payment be continued; and valuation sheets exhibiting statements of assets and liabilities as of January 1, 1916.

The investigation of the fund for municipal employees of Chicago could be based only to a slight degree on the experience of this fund for two reasons:

1. No pensions were paid until July 1, 1916. There was thus no pension experience on January 1, 1916, and consequently, there were no means of determining the rates at which employees would accept pensions under this fund.

2. Tables of withdrawals by reason of resignation in a service, compiled from an experience before a pension system was fully in operation, might not give even a fair indication as to the future experience of the same service in this particular after a pension system was established.

In this fund, therefore, we prepared a table giving the rates of withdrawal from service, and by assuming that pensions would be paid at certain specified ages to those having the required service qualifications, we have prepared different balance sheets showing the present condition of the fund under our specified hypotheses. It must be remembered, however, that the same confidence should not be placed in these results as predictions of the future costs as should be

placed in those under the Chicago firemen's, the Chicago policemen's and the Chicago teachers' funds.

The State teachers' pension and retirement fund involves a vast body of employees, but owing to the absence of records in anything like suitable form, the construction of a table giving entrance and withdrawal experience was out of the question in the limited time at our disposal for preparing this report. Indeed, it is doubtful if any experience table could be constructed from the records as they existed at the time the act went into force, and moreover, it is doubtful if any satisfactory actuarial investigation can be made of this fund until some plan is instituted for accumulating the required data from year to year.

Briefly stated, our treatment of this fund was as follows:

We scheduled, as far as we could secure data, the teachers in service on January 1, 1916, according to salaries, ages, and years of experience; and, on the supposition that teachers would accept pensions under certain conditions, as given in our discussion of that fund, we arrived at our results. These are offered as an estimate of the probable future cost of this fund, but one which would probably differ materially from actual results.

The remaining funds, because of the small number of employees involved, do not offer an experience of sufficient volume to warrant us in making any actuarial investigation of them.

NECESSITY FOR SEPARATE REPORT ON EACH FUND.

Since the conditions for retirement and the benefits offered in the nature of pensions differ widely for the various funds, we are obliged to make a separate report on each fund investigated, in order to give an idea of the probable future cost of maintaining such a fund.

PLAN FOLLOWED IN DETERMINATION OF FUTURE COSTS.

The determination of future costs was made in each case, as far as possible, from past experience in the operation of the fund. In each instance we gathered data to show the effect of the various elements that are operating to increase or decrease the resources of the fund. As far as this experience was adequate to determine the rates at which changes were taking place, it was used in our computations. When it was inadequate, we drew upon the experience of some similar fund that had been investigated and had an adequate experience. References to these sources will appear in the proper places.

DATA REQUIRED FOR DETERMINATION OF FUTURE COSTS.

For each fund it was necessary to find the following data:

1. The rate of mortality in the active force at given ages.
2. The rates of withdrawal by resignation or dismissal at given ages.
3. The rates of retirement on disability pensions at given ages.
4. The rates of service retirement at given ages.
5. The rates of mortality among disability pensioners at given ages.
6. The rates of mortality among service pensioners at given ages.

For certain funds, such as those of the policemen and firemen, it was necessary to know, in addition, the following:

7. The probability of death in the discharge of duty.
8. The probability that a man dying at a given age will leave a widow, and the probable age of such widow.
9. The rates of mortality of widows on the pension roll.
10. The rates of withdrawal of widows from pension by remarriage.
11. The average length of time a service pensioner of given age has been on the pension roll.
12. The number and ages of children per member of given age.
13. The rates of mortality of children under 16 years of age.
14. The probable rates of salary increase with respect to ages.
15. The probable amounts of pensions under given conditions.
16. The probability that a man of given age in active service has been in service 10 years.
17. The probability that a man of given age in active service has been in service 20 years.

GENERAL STATEMENT AS TO COLLECTION OF DATA.

To obtain the information necessary to determine the above-mentioned rates and probabilities, we fixed on certain dates on which to begin and terminate the collection of data. In the cases of the funds for Chicago firemen, Chicago policemen, and Chicago teachers, the date of beginning was January 1, 1906, and of ending was January 1, 1916. In the fund for municipal employees of Chicago, the data was collected from July 1, 1911, the date of inception of the fund, to January 1, 1916.

We then prepared five sets of questionnaires: One for those employees who were in active service January 1, 1916; one for former employees who were on the pension roll January 1, 1916; one for widow pensioners on the roll January 1, 1916; one for employees who were in service at date of beginning our accumulation of data, or at any time thereafter before January 1, 1916, but retired from service prior to January 1, 1916, for reason other than by pension; one for those who were on pension at date of beginning our accumulation of data, or any time thereafter previous to January 1, 1916, but were not on the pension roll on January 1, 1916.

A copy of the questionnaire prepared for those employees who were in active service January 1, 1916, is given on pp. 75-76.

ILLINOIS PENSION LAWS COMMISSION.

I hereby certify that the answers to the following questions are true and correct to the best of my knowledge and belief:

- 1. Name in full Family name. Given name or names.
- 2. Address.....
- 3. Age January 1, 1916..... Years. Months.
- 4. What was your rate of compensation on Jan. 1 of the year indicated below if you were then in any department of the Public Service:

Year.	If on annual salary give rate per annum.	If on a daily basis give rate per day.
1912		
1913		
1914		
1915		
1916		

Do not write in this space.

No.....
Make no entry.

These columns are for office use. Please do not mark in them.

- 1. Name in full..... Family name. Given name or names.

- 2. Mark with a cross underneath name of fund, the pension fund among the following from which you may be pensioned now or at a later time:

City police.	Fire.	Municipal employees.	Teachers.	Lincoln Park police.	South Park police.	West Park police.	School employees.	Public library employees.	House of correction employees.	County employees.
1-5										
6										
7										

- 4. State rank or title of your position, or nature of your employment as it appeared on the pay roll, Jan. 1, 1916.

.....

Public Employees in Active Service Jan. 1st, 1916.

NOTICE.

Please exercise great care in answering the inquiries on this schedule. If in doubt as to the proper answer to any question, consult the immediate superior officer or person designated by the head of the department to answer such inquiries. The purpose of these questions is to secure for the benefit of the Illinois Pension Laws Commission the necessary statistical basis for a complete actuarial investigation of all Pension Funds for Public Employees. Incorrect or careless statements will seriously affect the accuracy of the entire result. In the interest of a sound pension system your hearty cooperation is urged in making this census as accurate as possible. Your answers will be used collectively and no individual records will be published. If you desire, you may place this sheet in a sealed envelope, marking said envelope with name, and division, bureau or department in which you are employed.

Illinois Pension Laws Commission.

Offices: John P. Dillon,
76 W. Monroe St., Chicago. Marcus Jacobowsky,
Tel. Randolph 918. Henry L. Rietz,
Donald F. Campbell, George E. Hooker, Chairman.
Secretary and Actuary.

No.....
Make no entry.

3. Check sex. (below sex)	Male.	Female.
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5. Check marital condition.	Single.	Married.	Widowed.	Divorced.
--------------------------------	---------	----------	----------	-----------

11. State given name and date of birth of each of your children, eldest first. If any are dead, give date of death on same line as date of birth. If you have no children, write "No Children."

Name.	Date of birth.		Date of death.	
	Month.	Year.	Month.	Year.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

12. If you are at present or were at any time in receipt of a pension of any kind, state from what fund Amount per year, \$
 Dates between which pension was received. From to

13. If you are a veteran of the Civil or Spanish War, mark with cross the name of war.

Civil.	Spanish.
--------	----------

	Month.	Day.	Year.
8-9			
13-14			
15-16			
17-18			
19			
20-21			

6. Give date of your birth.

7. Give date of beginning of present service.

If you were married more than once, questions 8, 9 and 10 refer only to last wife.

8. Give date of wife's birth.

9. Give date of marriage.

10. If wife is dead, give date of death.

14. State your entire service in order of time that counts as service towards a pension. If you are a teacher give periods of service in public schools outside of your present city.

Name of department or institution in which you have been employed.	From date of ap- pointment.		To date of ter- mination.		Length of ser- vice.	
	Month.	Year.	Month.	Year.	Years.	Months.
1						
2						
3						
4						
5						
6						
7						

45

23-26

22

20-21

19

17-18

15-16

13-14

8-9

In the cases of the funds for Chicago firemen and Chicago policemen, the questionnaires relating to those in service January 1, 1916, were delivered to the chiefs of the respective departments and were distributed to the employees through the regular channels of communication of these departments. Those for the Chicago teachers' fund were delivered to the several principals by means of the supply wagons of the Board of Education and were returned to our office either by the supply wagons or by mail. Those for the municipal employees' fund were distributed and collected by the Finance Committee of the Chicago City Council.

The data on public school teachers, outside the county of Cook and city of Peoria, was collected through the several county superintendents from the applications for renewal of license filed by the teachers in the offices of these superintendents. In the county of Cook no such application was necessary; therefore, to get the desired information on teachers in this county, outside of Chicago, cards were mailed to the individual teachers. Cards were also mailed to the individual teachers of Peoria.

The questionnaires referring to pensioners and widows on the pension rolls January 1, 1916, were, in the case of the Chicago police fund, filled in from the records in the Police Pension Department. In no other instance were the records complete enough to afford us the proper data, and consequently we had these sheets filled in by the pensioners, either when they called to receive their checks or by mail.

The sheets applicable to those who were not in service or on the pension rolls January 1, 1916, were filled in by our own employees. As far as the information sought was available, it was transcribed from the records of the several departments. In many instances, however, the date of birth or date of entrance into service was missing, and for one or the other of these items of information, reference was made to application sheets on file in the offices of the Civil Service Commission, to the Department of Vital Statistics and to reports cited in the minutes of the Chicago City Council.

The data thus derived was transformed in the form of a code to cards, a sample of which is shown on page 78. The trans-

ference was made by punching certain numbers on these cards by means of the Powers punching machine.

After the cards were punched, they were taken to the Chicago city hall and there sorted on the Powers sorting machine. The results were then tabulated.

DIFFICULTIES ENCOUNTERED IN COLLECTING DATA FOR INVESTIGATION OF FUNDS.

In no cases were the records relating to the funds kept in such condition as to make possible an investigation of the experience of the fund for the period chosen, without reference to outside sources. In the Chicago police fund, the records were complete for such an investigation, with the exception of part of the data on those who died while in retirement on pension during the early years of the 10-year period chosen. In the Chicago firemen's fund, practically the only records kept were those giving receipts and disbursements under the fund, and had it not been for the active cooperation of all interested in this fund, both those in active service and on pension, an actuarial investigation would have been impossible. In the municipal employees' fund, the records were in a satisfactory condition considering the fact that payment of pensions began only on July 1, 1916, and that there was almost endless detail involved in establishing the period of service that would count toward pension in the cases of some of the older employees. At the time we drew off the data, however, the records were not complete.

In the Chicago teachers' fund, the information sought on those who were no longer in the service on January 1, 1916, and on those in service on that date who had not filed their sheets with us (the latter class comprising about 40 per cent of the teachers) was obtained from the cards and records in the offices of the Board of Education. This was a matter of extreme difficulty, complicated because of the change in name when a female teacher married and remained in service. We exercised as great care as possible in getting this data correct and used every means at our disposal to crosscheck on our work, so as to avoid duplicate sheets on the same individual. Although we can not hope that our information is as accurate as in the cases of the Chicago police fund and Chicago firemen's fund, where some 99 per cent of those in active service filed sheets with us, nevertheless we believe that whatever inaccuracy may have crept in will not affect our results materially.

PLAN OF INVESTIGATION OF FUND.

The plan of the investigation of each fund will unfold itself as we proceed with the discussion. The plan of exhibiting our monetary tables, however, is common to all funds on which we are able to render a complete report, and consists of two parts: one, a yearly valuation, showing the amounts per year that may be expected to be paid in pensions if the present plans continue; and the other, called a balance sheet, exhibiting what is ordinarily known as a valuation, giving under assets the amount in the fund and the present values of all the items of income that are guaran-

teed to accrue to the fund, and under liabilities the present values of expected future pension payments to pensioners of the fund, January 1, 1916, and to those at that time in active service when they become pensioned, together with eligible dependents.

The balance sheets are not concerned with costs for future entrants, but with costs due to present pensioners and to the members of the active service January 1, 1916.

REASON FOR TABLE GIVING YEARLY VALUATION.

Ordinarily the balance sheet would be sufficient in considering the question of the condition of the fund, as it would show either the amount in surplus to the credit of the fund after all liabilities were accounted for, if the fund was in a solvent condition, under the plan of pension payment adopted; or it would show the extra amount, for the raising of which provision must be made if the fund would remain solvent, in the case that sufficient funds were not being accumulated.

Such a solution, however, would not indicate what amount the employing body must expect to provide annually to meet pension payments, and as it appeared to us that this information would be important, in order to enable all persons concerned to know the financial demands per year, we have, at the expense of an immense amount of labor, presented tables showing this yearly cost.

RATE OF INTEREST ASSUMED IN THE BALANCE SHEET.

In preparing a balance sheet such as is shown in the police fund in Table XVI, p. 103, and in determining the percentages of salaries that would have to be deducted if future entrants were to pay for their own pensions by direct contributions, it is necessary to assume a rate of interest to be used in finding the present values of assets and liabilities. It is desirable to select a rate which is sufficiently high to provide for the employees a fair return on their investment and which at the same time is not in excess of what the fund could reasonably be expected to earn over a long period. The rate of 4 per cent, compounded annually, is adopted for this valuation, as it is thought that this could be earned in view of the present and prospective rates on long term city, municipal or state bonds.

THE TREATMENT IN THE BALANCE SHEET OF SOURCES OF REVENUE OTHER THAN EMPLOYEES' CONTRIBUTIONS.

In the balance sheets we have listed among the assets the present values of only those amounts which are guaranteed permanently. Thus, the seven-tenth mill tax for the police fund, the three-tenth mill tax for the firemen's fund, and the tax of an amount equal to the amount paid in by the employees during the previous calendar year in the fund for municipal employees of Chicago, being of a temporary nature, are not included in assets. On the other hand the payment by the city of Chicago of an amount equal to the amount contributed by the teachers to the Chicago teachers' fund is guaranteed without limitation of time, and consequently its present value is included in the assets in the balance sheet of that fund.

In comparing the balance sheets of these four funds, it must therefore be borne in mind carefully that the amounts to be provided

from sources other than contributions from salaries of employees, are, in the cases of the three funds first mentioned, the present values of the total provisions from all these other sources; whereas, in the case of the Chicago teachers' fund, the present value of the amount that must be provided from other sources is the provision that must be made over and above the present payment by the city of an amount equal to the amount contributed by the teachers.

PREDICTED COSTS MAY NOT COINCIDE WITH ACTUAL COSTS.

Our investigations assume, of necessity, that the entrance on pension is at a uniform rate within any given year. This is not what will probably actually occur, and when it does not, predicted costs may be realized a few months before or after the time indicated in our tables. The assumption, however, can lead to no error of practical importance.

GROWTH OF CITY NOT CONSIDERED.

In our investigations we have not, in the case of any fund, taken into account the probable future growth of the city. Our reasons for this are twofold:

1. The cost of providing pensions for those who would join the service to fill the need for an increasing body of employees required by an increasing population, would necessarily be, on the average, the same per entrant as the cost of providing pensions for those who entered the service to maintain it at its present size.
2. No assumption could be made, upon which all would agree.

REPORTING VALUES OF THE EXPECTATION TO THE NEAREST DOLLAR.

It will be observed in all our tables showing costs by years, that we have reported near the ends of certain columns some numbers smaller than any pension paid. Such numbers merely signify the calculated value of the expectation. We give the values of expectations out to the last dollar, even when amounts run into hundreds of thousands, or even millions, of dollars. Thus in the Chicago police fund, we report \$2,209,233 as the value of the ultimate normal expectation of pensions per year. The last three figures—namely, 233—of this number have no practical importance, except to indicate that we have calculated the value instead of estimating it.

THE POLICE FUND OF CHICAGO.

THE BENEFITS.

The following outline gives briefly a notion of the benefits:
To Employees.

No pension is less than \$600 nor more than \$900.

Service pensions within these limits:

Pension of one-half of salary attached to rank held for at least one year immediately prior to retirement is paid to all who choose to retire after 20 years of service.

Disability pensions:

Pension of one-half of final salary is awarded without service requirement, if disability occurs when in, and in consequence of, the performance of duty. Pension ceases when disability ceases.

To Widows of Employees.

Widow whose husband was retired on service pension, provided marriage took place at least six months before retirement, receives pension of deceased husband.

Widow whose husband was retired on disability pension, provided marriage took place before date of retirement, receives pension of deceased husband.

Widow whose husband lost his life in performance of duty—also widow whose husband died from any cause while in service after 10 years of service, receives a pension of one-half salary of rank held by husband for one year immediately prior to death, but in no case less than \$600 nor more than \$900.

To Other Dependents of Employees.

In all the following cases each family receives an amount equal to the pension provided for deceased father or the mother, to be divided equally among the children under 16 years of age:

Children of service pensioner, if no widow survives or surviving widow is ineligible because of date of marriage to former pensioner; children of disability pensioner, if no widow survives or if widow marries; children of policeman killed in performance of duty, if no widow survives; children of policeman who dies from any cause after 10 years of service.

Explanatory Note.

The following tables, I-III, pp. 83, 84; give a sort of summary of the results of the tabulations from the actual experience. This data is needed to determine rates at which certain changes are taking place. In order to save space, we can show our plan only in the form of a very general outline with details omitted.

DETERMINATION OF RATES OF CHANGES ON WHICH COST OF PENSIONS
DEPENDS.

From the experience, as outlined in Tables I-III, we proceeded to prepare for the various ages, the rates of mortality, rates of withdrawal from the service, rates of disability retirements, rates of service retirements and such probabilities as were needed to solve the problem of determining future costs.

For this purpose, we formed exposure tables which indicate the amount of service that has been rendered at given ages and what occurred with respect to number of deaths, retirements and withdrawals at such ages. The actual rates were then graduated into regular sequence. These results are given in Table IV, p. 85.

To illustrate the meaning of these numbers, take for instance a number such as 0.0262 in Column (2) opposite age 28. This number means that at age 28, withdrawals by resignation

TABLE I—(Chicago Policemen).

ACTUAL EXPERIENCE WITH THOSE WHO HAVE BEEN IN ACTIVE SERVICE WITHIN THE PERIOD JANUARY 1, 1906, AND JANUARY 1, 1916.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Age.	Survivors of Jan. 1, 1906, on active force Jan. 1, 1916, with ages as of Jan. 1, 1906.	Survivors of Jan. 1, 1906, not on active force Jan. 1, 1916, with ages as of Jan. 1, 1906.	Entrants still on active force, with ages at entrance.	Entrants withdrawn from active force before Jan. 1, 1916, with ages at entrance.	Withdrawals by resignation or dismissal, with ages at withdrawal.	Deaths in line of duty, with ages at death.	Other deaths, with ages at death.	Disability retirements from injuries in line of duty, with ages at retirement.	Other disability retirements, with ages at retirement.	Service retirements, with ages at retirement.	Total decrements, sum of (6), (7), (8), (9), (10) and (11).	Existing Jan. 1, 1916, on active list, with ages as of Jan. 1, 1916.	Married men on active force, with ages as of Jan. 1, 1916.	Men with 10 or more years of service, with ages as of Jan. 1, 1916.
21.....	2	.....	6	13	5	.....	.....	.....	.....	.....	5	.....	.....	.....
22.....	2	.....	53	25	7	.....	.....	.....	.....	.....	7	.....	.....	.....
23.....	0	.....	72	32	9	.....	2	.....	.....	.....	11	.....	.....	.....
24.....	1	.....	81	45	20	.....	0	.....	.....	.....	21	.....	.....	.....
25.....	5	.....	191	56	17	1	5	.....	.....	.....	22	.....	.....	.....
26.....	6	.....	339	57	27	0	3	.....	.....	.....	30	.....	.....	.....
27.....	13	1	319	44	41	0	6	.....	.....	.....	47	.....	.....	.....
28.....	19	1	302	53	42	0	9	.....	.....	.....	53	.....	.....	.....
29.....	15	0	298	55	50	2	12	.....	.....	.....	63	.....	.....	.....
30.....	25	3	299	each age.	.....	1	.....	0	.....	.....	.....	142	.....	.....
Etc.....	.....	.....	Detail for	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals....	1,808	1,044	3,022	588	473	23	480	26	14	616	1,632	4,830	3,837	2,312

TABLE II—(Chicago Policemen).

ACTUAL EXPERIENCE WITH SERVICE PENSIONERS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Survivors of Jan. 1, 1906, still on roll Jan. 1, 1916, with ages as of Jan. 1, 1906.	Deaths among survivors of 1906, with ages at death.	Returns to service of survivors of Jan. 1, 1906, with ages at return.	Entrants to pension still on roll Jan. 1, 1916, with ages at entrance.	Deaths among entrants to pension, with ages at death.	Returns to service of entrants on pension, with ages at return.	Existing on roll Jan. 1, 1916, with ages as of Jan. 1, 1916.
39.....	1	.....	.....	.....	.....	.....	.....
40.....	1	.....	.....	.....	.....	.....	.....
41.....	0	.....	.....	.....	.....	.....	.....
42.....	0	.....	.....	.....	.....	.....	.....
43.....	0	.....	.....	3	.....	1	3
44.....	0	.....	.....	1	.....	.....	1
45.....	1	.....	.....	2	.....	.....	2
46.....	2	0	0	2	2	2	9
Etc.		Detail for	each age.				
Totals....	76	66	1	479	106	18	555

TABLE III—(Chicago Policemen).

ACTUAL EXPERIENCE WITH DISABILITY PENSIONERS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Survivors of Jan. 1, 1906, still on the roll Jan. 1, 1916, with ages as of Jan. 1, 1906.	Deaths among survivors of 1906, with ages at death.	Returns to service of survivors of Jan. 1, 1906, with ages at return.	Entrants on pension still on roll Jan. 1, 1916, with ages at entrance.	Deaths among entrants to pension, with ages at death.	Returns to service of entrants on pension, with ages at return.	Existing on roll Jan. 1, 1916, with ages as of Jan. 1, 1916.
32.....	0	.....	.....	1	.....	.....	.....
33.....	0	.....	.....	1	1	.....	.....
34.....	0	.....	.....	0	1	.....	.....
35.....	1	1	.....	0	0	.....	.....
36.....	0	0	0	1	0	0	.....
Etc.		Detail for	each age.				
Totals....	19	17	2	27	14	1	46

or dismissal are at the rate of 2.62 per year per 100 men of that age on the force.

In dealing with the probable future cost for widows, we needed to know what the probabilities are that men of various classes and ages will leave widows eligible to a pension. For this purpose, we calculated the probability that a man dying at a given age will leave a widow, the probability that a man dying in active service will have had at least 10 years of service, and the probability that a man dying in active service will have had at least 20 years of service. These results are also given in Table IV, p. 85.

TABLE IV—(Chicago Policemen).

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality on active force from causes other than under (4).	Rates of death directly in line of duty.	Rates of disability retirements.	Rates of service retirements.	Rates of mortality among service pensioners plus probabilities of return to service.	Probabilities that a man dying leaves a widow.	Probabilities that a man dying in active service had been 10 or more years in service.	Probabilities that a man dying in active service had been 20 or more years in service.
22.....	0.0573	0.00337							
23.....	0.0450	0.00357							
24.....	0.0350	0.00375							
25.....	0.0316	0.00392	0.00040				0.400		
26.....	0.0288	0.00409	0.00048				0.460		
27.....	0.0275	0.00426	0.00054				0.520		
28.....	0.0262	0.00443	0.00058				0.568		
29.....	0.0247	0.00461	0.00060				0.606		
30.....	0.0232	0.00479	0.00062				0.644		
31.....	0.0220	0.00497	0.00062	0.0005			0.680	0.014	
32.....	0.0203	0.00515	0.00064	0.0005			0.713	0.040	
33.....	0.0190	0.00540	0.00064	0.0006			0.741	0.070	
34.....	0.0173	0.00566	0.00066	0.0006			0.766	0.096	
35.....	0.0160	0.00600	0.00066	0.0007			0.790	0.125	
36.....	0.0142	0.00645	0.00066	0.0008			0.810	0.155	
37.....	0.0131	0.00695	0.00066	0.0008			0.827	0.190	
38.....	0.0110	0.00750	0.00068	0.0009			0.838	0.240	0.008
39.....	0.0090	0.00800	0.00069	0.0010			0.845	0.315	0.016
40.....	0.0075	0.00856	0.00070	0.0011			0.849	0.415	0.027
41.....	0.0058	0.00920	0.00071	0.0011	0.0010	0.0380	0.853	0.535	0.045
42.....	0.0044	0.00980	0.00073	0.0012	0.0028	0.0380	0.855	0.654	0.071
43.....	0.0037	0.01050	0.00075	0.0012	0.0046	0.0382	0.858	0.765	0.107
44.....	0.0032	0.01130	0.00077	0.0013	0.0064	0.0384	0.859	0.873	0.162
45.....	0.0029	0.01220	0.00081	0.0013	0.0082	0.0385	0.860	0.906	0.235
46.....	0.0028	0.01320	0.00087	0.0013	0.0100	0.0388	0.860	0.930	0.329
47.....	0.0027	0.01425	0.00093	0.0014	0.0125	0.0390	0.860	0.946	0.416
48.....	0.0026	0.01565	0.00094	0.0014	0.0150	0.0395	0.861	0.960	0.505
49.....	0.0025	0.01710	0.00095	0.0015	0.0185	0.0400	0.861	0.974	0.595
50.....	0.0025	0.01870	0.00096	0.0016	0.0246	0.0405	0.862	0.982	0.677
51.....	0.0025	0.02030	0.00097	0.0016	0.0310	0.0410	0.861	0.988	0.738
52.....	0.0025	0.02200	0.00098	0.0017	0.0375	0.0418	0.860	0.990	0.788
53.....	0.0025	0.02370	0.00099	0.0019	0.0446	0.0425	0.859	0.990	0.822
54.....	0.0025	0.02580	0.00099	0.0017	0.0520	0.0433	0.858	0.990	0.845
55.....	0.0025	0.02840	0.00100	0.0016	0.0595	0.0442	0.855	0.990	0.861
56.....	0.0025	0.03080	0.00090	0.0015	0.0680	0.0450	0.850	0.990	0.872
57.....	0.0025	0.03330	0.00060	0.0014	0.0776	0.0462	0.848	0.990	0.882
58.....	0.0025	0.03570	0.00010	0.0012	0.0850	0.0475	0.845	0.990	0.890
59.....		0.03810		0.0010	0.0940	0.0488	0.842	0.990	0.896
60.....		0.04060		0.0008	0.1035	0.0500	0.840	0.990	0.902
61.....		0.04320		0.0007	0.1134	0.0515	0.835	0.990	0.908
62.....		0.04590		0.0006	0.1250	0.0530	0.833	0.990	0.914
63.....		0.04900		0.0005	0.1375	0.0547	0.829	0.990	0.920
64.....		0.05220		0.0004	0.1505	0.0565	0.825	0.990	0.926
65.....		0.05550		0.0002	0.1640	0.0583	0.821	0.990	0.932
66.....		0.05890			0.1785	0.0605	0.817	0.990	0.938
67.....		0.06240			0.1950	0.0625	0.893	0.990	0.944
68.....		0.06600			0.2015	0.0648	0.810	0.990	0.950
69.....		0.06970			0.2245	0.0670	0.805	0.990	0.956
70.....		0.07350			0.2396	0.0700	0.800	0.990	0.962
71.....		0.07740			0.2575	0.0728	0.795	0.990	0.968
72.....		0.08140			0.2745	0.0760	0.790	0.990	0.974
73.....		0.08560			0.29	0.0800	0.785	0.990	0.980
74.....		0.09000			0.32	0.0850	0.780	0.990	0.986
75.....		0.09460			0.36	0.0910	0.775	0.990	0.990
76.....		0.09940			0.41	0.0992	0.769	0.995	0.99
77.....		0.10440			0.47	0.1095	0.763	0.997	0.99
78.....		0.11000			0.80	0.1205	0.757	0.999	0.99
79.....						0.1317			
80.....						0.1445			
81.....						0.1586			
82.....						0.1743			
83.....						0.1916			
84.....						0.2114			
85.....						0.2356			
86.....						0.2657			
87.....						0.3030			
88.....						0.3467			

TABLE IV—Concluded.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality on active force from causes other than under (4).	Rates of death directly in line of duty.	Rates of disability retirements.	Rates of service retirements.	Rates of mortality among service pensioners plus probabilities of return to service.	Probabilities that a man dying leaves a widow.	Probabilities that a man dying in active service had been 10 or more years in service.	Probabilities that a man dying in active service had been 20 or more years in service.
89....	0.3959	.....	.....	.....
90....	0.4545	.....	.....	.....
91....	0.5325	.....	.....	.....
92....	0.6343	.....	.....	.....
93....	0.7342	.....	.....	.....
94....	0.8571	.....	.....	.....

We required also the average ages of wives for various ages of husbands, and average length of time during which service pensioners of given age had been on the pension roll. See Tables V and VI, below.

TABLE V—(Chicago Policemen).

AVERAGE AGE OF WIFE FOR VARIOUS AGES OF HUSBAND.
(Graduated Values).

Age of husband.	Average age of wife.	Age of husband.	Average age of wife.	Age of husband.	Average age of wife.	Age of husband.	Average age of wife.	Age of husband.	Average age of wife.
25	23.0	35	32.0	45	41.0	55	49.8	65	58.9
26	24.1	36	32.8	46	41.9	56	50.7	66	59.7
27	24.9	37	33.7	47	42.7	57	51.6	67	60.4
28	25.8	38	34.7	48	43.4	58	52.7	68	61.0
29	26.8	39	35.5	49	44.3	59	53.6	69	61.5
30	27.6	40	36.5	50	45.2	60	54.7	70	62.1
31	28.5	41	37.3	51	46.0	61	55.5	71	62.7
32	29.5	42	38.3	52	47.0	62	56.4	72	63.3
33	30.3	43	39.2	53	47.9	63	57.3	73	64.0
34	31.2	44	40.1	54	48.9	64	58.1	74	65.0

TABLE VI—(Chicago Policemen).

AVERAGE TIME SERVICE PENSIONERS OF GIVEN AGE HAVE BEEN ON THE PENSION ROLL.
(Graduated Values).

Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)
43	1.75	50	2.02	57	2.90	64	4.75	71	9.15
44	1.76	51	2.18	58	3.12	65	5.12	72	10.05
45	1.80	52	2.24	59	3.32	66	5.50	73	11.00
46	1.85	53	2.32	60	3.50	67	6.00	74	12.00
47	1.87	54	2.45	61	3.75	68	6.48	75	13.00
48	1.90	55	2.60	62	4.03	69	7.10	76	14.00
49	1.95	56	2.75	63	4.38	70	8.40	77	15.00

We needed also the rates of mortality on widows, but as the ages at death of those widows who had died while pensioners were not available, we were unable to find these from the experience of the fund. We were compelled, therefore, to rely upon

outside experience for this information, and chose the Combined Experience Table of Mortality. This we checked against the death rates of widows of New York policemen and found that the two agreed well.

Regarding rates of mortality among disability pensioners, on account of the scarcity of data we were obliged to adopt for such pensioners the rates of other experiences. We have chosen, as best adapted to our purpose, the rates compiled from various funds by the eminent authority on pension funds, Mr. H. W. Manly.

ACTIVE SERVICE TABLE AND SALARY AND PENSION SCALES.

The rates given in Table IV were used to construct the active service table (Table VII, p. 87). In this table, the columns (2) to (7) are constructed by applying the rates at each age to the number of survivors at that age. To illustrate the meaning of this table, we may note that with the 57,170 persons at age 40 under observation for a year, and with rates experienced during the 10 years from 1906 to 1916, we should find 429 withdrawals, 40 deaths in line of duty, 489 deaths from other causes, and 63 disability retirements.

The salary and pension scales were prepared from salaries of the active service as of January 1, 1916. The pension scale thus constructed is a proper standard for future entrants on the pension rolls. The two scales represent merely a graduation of the average salaries or pensions at given ages. For those already on pension we knew the actual pensions, and therefore did not require a pension scale. These actual pensions are given in Tables VIII, IX, X and XI, pp. 88 to 91.

TABLE VII—(Chicago Policemen).

ACTIVE SERVICE TABLE, AND SALARY AND PENSION SCALES.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	Total decrements. Cols. (3)+(4)+(5) +(6)+(7).	Salary scale from active service Jan. 1, 1916.	Pension scale for males of age at entrance upon future pensions.
Age.	Active service.	Withdrawals.	Dying in line of duty.	Other deaths.	Disability re- tirements.	Service retire- ments.			
22.....	100,000	5,730	.....	337	.....	.....	6,067	.....	.....
23.....	93,933	4,227	.....	335	.....	.....	4,562	.....	.....
24.....	89,371	3,128	.....	335	.....	.....	3,463	.....	.....
25.....	85,908	2,715	34	337	.....	.....	3,086	\$ 910	.....
26.....	82,822	2,381	40	339	.....	.....	2,760	947	.....
27.....	80,062	2,202	43	341	.....	.....	2,586	1,007	.....
28.....	77,476	2,030	45	343	.....	.....	2,418	1,087	.....
29.....	75,058	1,858	45	346	.....	.....	2,249	1,165	.....
30.....	72,809	1,691	45	349	.....	.....	2,085	1,220	.....
31.....	70,724	1,557	44	351	35	.....	1,987	1,257	\$654
32.....	68,737	1,395	44	354	34	.....	1,827	1,281	656
33.....	66,910	1,271	43	361	40	.....	1,715	1,300	660
34.....	65,195	1,125	43	369	39	.....	1,576	1,312	665
35.....	63,619	1,020	42	382	45	.....	1,489	1,323	668
36.....	62,130	882	41	401	50	.....	1,374	1,332	670
37.....	60,756	796	40	422	49	.....	1,307	1,342	674
38.....	59,449	654	40	446	54	.....	1,194	1,351	675
39.....	58,255	521	40	468	58	.....	1,085	1,360	678
40.....	57,170	429	40	489	63	.....	1,021	1,370	680
41.....	56,149	323	40	517	63	56	999	1,380	682
42.....	55,150	243	40	540	64	154	1,041	1,391	685

TABLE VII—Concluded.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	Total decrements, Cols. (3)+(4)+(5) +(6)+(7).	Salary scale from active service Jan. 1, 1916.	Pension scale for males of age at entrance upon future pensions
Age.	Active service.	Withdrawals.	Dying in line of duty.	Other deaths.	Disability re- tirements.	Service retire- ments.			
43.....	54,109	200	41	568	65	249	1,123	\$1,402	\$690
44.....	52,986	170	41	599	69	339	1,218	1,413	695
45.....	51,768	150	42	632	67	424	1,315	1,421	696
46.....	50,453	141	44	666	66	505	1,422	1,428	700
47.....	49,031	132	46	699	69	613	1,559	1,434	702
48.....	47,472	123	45	743	66	712	1,689	1,440	706
49.....	45,733	114	43	783	69	847	1,856	1,446	708
50.....	43,927	110	42	821	70	1,081	2,124	1,450	709
51.....	41,803	105	41	849	69	1,296	2,360	1,455	709
52.....	39,443	99	39	868	67	1,479	2,552	1,456	709
53.....	36,891	92	37	874	70	1,645	2,718	1,457	708
54.....	34,173	85	34	882	58	1,777	2,836	1,456	708
55.....	31,337	78	31	890	50	1,865	2,914	1,455	708
56.....	28,423	71	26	875	43	1,933	2,948	1,453	707
57.....	25,475	64	15	848	36	1,951	2,914	1,451	706
58.....	22,561	56	2	805	27	1,918	2,808	1,448	705
59.....	19,753	.....	.....	753	20	1,857	2,630	1,445	704
60.....	17,123	.....	.....	695	14	1,772	2,481	1,441	703
61.....	14,642	.....	.....	633	10	1,660	2,303	1,437	702
62.....	12,339	.....	.....	566	7	1,542	2,115	1,432	701
63.....	10,224	.....	.....	501	5	1,406	1,912	1,427	700
64.....	8,312	.....	.....	434	3	1,251	1,688	1,423	699
65.....	6,624	.....	.....	368	1	1,086	1,455	1,419	697
66.....	5,169	.....	.....	304	.....	923	1,227	1,413	696
67.....	3,942	.....	.....	246	.....	769	1,015	1,408	695
68.....	2,927	.....	.....	193	.....	616	809	1,400	694
69.....	2,118	.....	.....	148	.....	475	623	1,393	694
70.....	1,495	.....	.....	110	.....	358	468	1,385	693
71.....	1,027	.....	.....	79	.....	264	343	1,376	692
72.....	684	.....	.....	56	.....	188	244	1,366	691
73.....	440	.....	.....	38	.....	128	166	1,355	690
74.....	274	.....	.....	25	.....	88	113	1,348	689
75.....	161	.....	.....	15	.....	58	73	1,343	688
76.....	88	.....	.....	9	.....	36	45	1,338	687
77.....	43	.....	.....	5	.....	20	25	1,332	686
78.....	18	.....	.....	2	.....	14	16	1,327	685
79.....	2	.....	.....	.....	.....	2	2	1,322	685
80.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	.....	37,968	1,318	25,742	1,615	33,357	100,000	.....	.....

TABLE VIII—(Chicago Policemen).

THE NUMBER AND AVERAGE PENSION OF SERVICE PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age.	Num- ber.	Average pen- sion.	Total pensions.	Age.	Num- ber.	Average pen- sion.	Total pensions.
43....	3	\$620 00	\$ 1,860	61.....	21	\$644 28	\$13,530
44.....	1	660 00	660	62.....	17	672 82	11,438
45.....	2	735 50	1,471	63.....	23	681 00	15,663
46.....	9	646 67	5,820	64.....	14	647 71	9,068
47.....	10	666 00	6,660	65.....	10	717 00	7,170
48.....	11	641 91	7,061	66.....	13	659 23	8,570
49.....	17	706 47	12,010	67.....	10	655 00	6,550
50.....	19	634 21	12,050	68.....	14	717 42	10,044
51.....	21	713 81	14,990	69.....	18	646 94	11,645
52.....	21	680 00	14,280	70.....	14	631 85	8,846
53.....	21	667 71	14,022	71.....	15	658 66	9,880
54.....	28	675 00	18,900	72.....	12	664 50	7,974
55.....	31	676 77	20,980	73.....	9	899 77	6,208
56.....	26	655 69	17,048	74.....	9	650 22	5,852
57.....	30	655 53	19,666	75.....	5	663 20	3,316
58.....	24	701 60	16,838	76.....	7	586 85	4,108
59.....	21	684 50	14,375	77.....	4	641 50	2,566
60.....	29	664 82	19,280	78.....	3	572 00	1,716

TABLE VIII—Concluded.

Age.	Num-ber.	Average pen-sion.	Total pensions.	Age.	Num-ber.	Average pen-sion.	Total pensions.
79....	3	\$533 33	\$1,600	84.....	1	\$808 00	\$808
80....	3	571 33	1,714	88.....	1	500 00	500
81....	2	554 00	1,108	Totals	555	.....	\$389,453
82....	2	600 00	1,200				
83....	1	608 00	608				

TABLE IX—(Chicago Policemen).

THE NUMBER AND AVERAGE PENSION OF DISABILITY PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age 1916.	Pensioners disabled in performance of duty.			Pensioners disabled but not in performance of duty.			Totals.		
	Num-ber.	Total pensions.	Average pension.	Num-ber.	Total pensions.	Average pension.	Num-ber.	Total pensions.	Average pension.
33.....	2	\$1,450	\$725 00	.....	.....	.....	2	\$1,450	\$725 00
34.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37.....	2	1,320	660 00	.....	.....	.....	2	1,320	660 00
38.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
39.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40.....	1	660	660 00	.....	.....	.....	1	660	660 00
41.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
42.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
43.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
44.....	.....	.....	.....	2	\$1,320	\$660 00	2	1,320	660 00
45.....	1	600	600 00	.....	.....	.....	1	600	600 00
46.....	1	600	600 00	.....	.....	.....	1	600	600 00
47.....	.....	.....	.....	1	660	660 00	1	660	660 00
48.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
49.....	2	1,260	630 00	.....	.....	.....	2	1,260	630 00
50.....	1	600	600 00	.....	.....	.....	1	600	600 00
51.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
52.....	1	600	600 00	1	600	600 00	2	1,200	600 00
53.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
54.....	3	1,868	622 67	.....	.....	.....	3	1,868	622 67
55.....	2	1,208	604 00	3	1,800	600 00	5	3,008	601 60
56.....	4	2,520	630 00	.....	.....	.....	4	2,520	630 00
57.....	2	1,260	630 00	.....	.....	.....	2	1,260	630 00
58.....	4	2,400	600 00	1	600	600 00	5	3,000	600 00
59.....	3	1,800	600 00	.....	.....	.....	3	1,800	600 00
60.....	1	600	600 00	1	600	600 00	2	1,200	600 00
61.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
62.....	1	600	600 00	.....	.....	.....	1	600	600 00
63.....	1	660	660 00	1	900	900 00	2	1,560	780 00
64.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
65.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
66.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
67.....	1	600	600 00	1	600	600 00	2	1,200	600 00
68.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
69.....	1	500	500 00	.....	.....	.....	1	500	500 00
70.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
71.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
72.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
73.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
74.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
75.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
77.....	1	600	600 00	.....	.....	.....	1	600	600 00
78.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
79.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.	35	\$21,706	.....	11	\$7,060	.....	46	\$28,766	.....

TABLE X—(Chicago Policemen).

THE NUMBER AND AVERAGE PENSION OF WIDOW PENSIONERS AS OF
JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Class A.*				Class B.*				Class C.*			
Age.	Num- ber.	Average pension.	Total pen- sions.	Age.	Num- ber.	Average pension.	Total pen- sions.	Age.	Num- ber.	Average pension.	Total pen- sions.
22....	1	\$660 00	\$ 660	31....	1	\$660 00	\$ 660	29...	1	\$660 00	\$ 660
23....	1	660 00	660	32....	.....	.....	.....	30...	1	660 00	660
24....	.....	.....	.....	33....	.....	.....	.....	31....	.....	.....	.....
25....	.....	.....	.....	34....	2	705 00	1,410	32....	.....	.....	.....
26....	.....	.....	.....	35....	.....	.....	.....	33....	.....	.....	.....
27....	.....	.....	.....	36....	.....	.....	.....	34....	2	630 00	1,260
28....	.....	.....	.....	37....	.....	.....	.....	35....	1	600 00	600
29....	1	660 00	660	38....	2	630 00	1,260	36....	2	600 00	1,200
30....	1	660 00	660	39....	5	678 00	3,390	37....	2	660 00	1,320
31....	1	660 00	660	40....	1	660 00	660	38....	.....	.....	.....
32....	.....	.....	.....	41....	4	708 75	2,835	39....	5	624 00	3,120
33....	2	600 00	1,200	42....	4	667 50	2,670	40....	5	647 00	3,235
34....	.....	.....	.....	43....	6	680 00	4,080	41....	5	615 00	3,075
35....	.....	.....	.....	44....	6	685 00	4,110	42....	4	621 25	2,485
36....	3	641 67	1,925	45....	6	655 00	3,930	43....	6	578 33	3,470
37....	.....	.....	.....	46....	6	645 00	3,870	44....	7	645 71	4,520
38....	1	725 00	725	47....	5	756 00	3,780	45....	10	577 00	5,770
39....	1	600 00	600	48....	7	657 13	4,600	46....	12	575 00	6,900
40....	3	620 00	1,860	49....	6	736 67	4,420	47....	8	621 25	4,970
41....	.....	.....	.....	50....	12	661 67	7,940	48....	11	592 73	6,520
42....	3	586 67	1,760	51....	16	689 69	11,035	49....	5	604 00	3,020
43....	4	590 00	2,360	52....	8	686 25	5,490	50....	9	580 00	5,220
44....	4	525 00	2,100	53....	17	647 24	11,003	51....	20	616 00	12,320
45....	3	620 00	1,860	54....	7	690 00	4,830	52....	9	578 89	5,210
46....	6	575 00	3,450	55....	13	649 69	8,446	53....	17	580 00	9,860
47....	2	630 00	1,260	56....	15	642 53	9,638	54....	11	602 00	6,622
48....	5	580 00	2,900	57....	11	684 55	7,350	55....	19	594 74	11,300
49....	8	545 00	4,360	58....	8	671 25	5,370	56....	10	550 00	5,500
50....	5	540 00	2,700	59....	6	596 00	3,576	57....	10	570 00	5,700
51....	9	556 67	5,010	60....	7	681 43	4,770	58....	11	560 00	6,160
52....	5	520 00	2,600	61....	2	580 00	1,160	59....	2	625 00	1,250
53....	6	556 67	3,340	62....	11	671 62	7,390	60....	3	583 33	1,750
54....	1	900 00	900	63....	10	664 00	6,640	61....	4	537 50	2,150
55....	6	550 00	3,300	64....	6	551 33	3,308	62....	5	550 00	2,750
56....	4	525 00	2,100	65....	9	700 00	6,300	63....	3	490 67	1,472
57....	4	565 00	2,260	66....	13	671 69	8,732	64....	5	590 00	2,950
58....	3	500 00	1,500	67....	4	640 00	2,560	65....	4	518 00	2,072
59....	7	574 29	4,020	68....	3	655 33	1,966	66....	5	540 00	2,700
60....	2	550 00	1,100	69....	5	540 00	2,700	67....	2	625 00	1,250
61....	2	500 00	1,000	70....	7	579 71	4,058	68....	1	485 00	485
62....	3	516 67	1,550	71....	3	750 00	2,250	69....	3	550 00	1,650
63....	1	500 00	500	72....	2	600 00	1,200	70....	4	525 00	2,100
64....	2	500 00	1,000	73....	6	550 17	3,301	71....	4	518 25	2,073
65....	2	500 00	1,000	74....	2	600 00	1,200	72....	2	500 00	1,000
66....	2	500 00	1,000	75....	4	525 00	2,100	73....	3	500 00	1,500
67....	1	600 00	600	76....	2	679 00	1,358	74....	.....	.....	.....
68....	1	500 00	500	77....	3	666 67	2,000	75....	.....	.....	.....
69....	1	500 00	500	78....	1	600 00	600	76....	1	500 00	500
70....	1	500 00	500	79....	1	608 00	608	77....	1	550 00	550
71....	1	500 00	500	80....	2	550 00	1,100	.....	.....	.....	.....
72....	2	630 00	1,260	81....	.....	.....	.....	.....	.....	.....	.....
73....	.....	.....	.....	82....	.....	.....	.....	.....	.....	.....	.....
74....	.....	.....	.....	83....	1	500 00	500	.....	.....	.....	.....
75....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
77....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
78....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
79....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
80....	1	900 00	900	.....	.....	.....	.....	.....	.....	.....	.....
81....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
82....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
83....	1	725 00	725	.....	.....	.....	.....	.....	.....	.....	.....
84....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	123	.....	\$70,125	.....	278	.....	\$182,154	.....	255	.....	\$148,879

*For definitions of these classes see p. 91.

TABLE XI—(Chicago Policemen).

NUMBER OF FAMILIES AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE OF YOUNGEST CHILD.

Age.	Num-ber.	Average pen-sion per family.	Total pensions.	Age.	Num-ber.	Average pen-sion per family.	Total pensions.
7....	1	\$725 00	\$ 725	13.....	4	\$617 50	\$2,470
8.....				14.....	2	630 00	1,260
9.....	2	675 00	1,350	15.....	6	590 00	3,540
10.....	2	705 00	1,410				
11.....	4	600 00	2,400	Totals	22	.....	\$13,815
12.....	1	660 00	660				

Grand total of all pensions given in Tables VIII, IX, X and XI, \$813,212.

CLASSES OF PENSIONERS, PRESENT AND FUTURE.

In making our calculations, the whole group under observation was divided into three classes, as follows:

1. All pensioners on the pension roll January 1, 1916, together with their dependents eligible for pension upon death of any such pensioner.

2. All in active service January 1, 1916, together with their surviving dependents eligible for pension.

3. All who enter service after January 1, 1916, together with their surviving dependents eligible for pension.

WIDOW PENSIONERS.

It was desirable for our purpose to separate widow pensioners, both present and future, into the following three classes:

(A) Widows whose husbands died in performance of duty or from injuries received in performance of duty.

(B) Widows whose husbands were either service pensioners or active members of the force at death after at least 20 years of service.

(C) Remaining widows—these include widows whose husbands died from any cause other than injuries received in performance of duty within more than 10, but less than 20, years of service, and the small subclass whose husbands, though disabled, did not receive injuries directly in performance of duty.

CHILDREN PENSIONERS.

On January 1, 1916, there were 22 families of children on the pension roll. We collected data on the children for all participants from January 1, 1906, to January 1, 1916, but the expected number of families that are left with both parents dead is so small as hardly to constitute a very reliable basis of prediction for the future. It is certain that under present provisions of the law, the costs for children's pensions have reached practically a normal cost; in other words, that the system is carrying a normal load. For these reasons, we carry the children's pensions at their present cost in our predictions of future costs.

For mortality, among children, we used the Standard Industrial Table of Mortality.

ALL PENSIONERS ON PENSION ROLL JANUARY 1, 1916, TOGETHER WITH
THEIR DEPENDENTS ELIGIBLE FOR PENSION UPON DEATH OF
ANY SUCH PENSIONER.

The expected cost by years under this class is given in Table XII, p. 96.

ALL IN ACTIVE SERVICE JANUARY 1, 1916, TOGETHER WITH THEIR
SURVIVING DEPENDENTS ELIGIBLE FOR PENSION.

The expected cost by years under this class is given in Table XIII, p. 98.

ALL WHO ENTER SERVICE AFTER JANUARY 1, 1916, TOGETHER WITH
THEIR SURVIVING DEPENDENTS ELIGIBLE FOR PENSION.

The expected cost by years under this group is given in Table XIV, p. 100.

It will be observed that we have given no value for widow pensioners of new entrants in 1916. This value is so small that we have simply assumed it would be zero and applied the pension rates to the entrants into active service as if they entered at the end of the year of entrance.

TABLE XV.

This table contains the totals of Tables XII, XIII and XIV, and thus includes the total expected costs of pensions by years in this fund. It also gives for each year, until the system carries its normal load, the ratios of pension payments to salaries, the percentage of salaries contributed to pensions by employees, and the percentage of salaries that must be contributed from sources other than contributions by employees to maintain pensions under the present plan. It is given on pp. 101, 102.

TABLE XVI.

This table presents the balance sheet pertaining to this fund. For further reference to it, see p. 103.

SIGNIFICANT OBSERVATIONS FROM TABLE IV.

The rates of withdrawal by resignation and dismissal are, in general, low compared with those of other occupations on which we have data.

The rates of mortality for the younger ages in the active service are light in comparison with rates given in standard mortality tables used in life insurance, and in comparison with tables based on the general population. The mortality remains rather low until a little above age 40, when it increases gradually to a rate which somewhat exceeds that of the American Experience Table of Mortality.

The rate of mortality among service pensioners is high in comparison with rates in standard tables from age at the time of retirement up to about age 79, after which the experience coincides closely with the American Experience Table.

The rate of mortality in line of duty is not easily compared with other accidental death rates, as accident tables are not avail-

able. The rates given are larger than corresponding rates for the New York police force. However, it is clear that the mortality in the line of duty is so low as to show that the popular impression that the Chicago police service is extremely hazardous is not well founded on fact. The disability rates compare favorably with those of certain fraternal orders with total and permanent disability. Within the 10-year period there have been service retirements at an age as low as 41. The rate of such retirement gradually increases, becoming heavy at from ages 45 to 50 and reaching a maximum at age 57.

THE PENSIONERS WHO WILL COME FROM FUTURE ENTRANTS INTO THE ACTIVE SERVICE.

During the 10 years considered in this investigation, the average age at entrance to the police force is 29.7 years. When a certain class of re-entrants is eliminated, the average age is 29.1 years. In making the valuation, an entrance age of 29 is assumed. The lower the age of entrance, the less is the cost for pensions in relation to salary.

The maintenance of a service of the size of the present one, under the same conditions of death and withdrawal as those found in the period from 1906 to 1916, would require that 219 men enter the service annually at ages averaging near 29 years. This number of entrants was therefore used at age 29, and the annual cost of thus maintaining pensions in the service was determined. This is exhibited in Table XIV.

PRESENT AND FUTURE COSTS.

It will be noted from Table XV that the pension payments in 1916 will amount to about 13.3 per cent of salary payments, and that this per cent will increase gradually for about 40 years, when the system will carry slightly more than the ultimate normal load. This larger cost at the end of about 40 years is due to the nature of the distribution of ages of present participants in the fund. The pensions will cost about 34.3 per cent of salaries when the system is carrying its ultimate normal load. The total salary payments to participants as of January 1, 1916, is within less than one-half per cent of what the salaries for 4,830 men will be when the pension system carries its normal load; in fact, for all practical purposes it is as well for us to assume that salary payments will be constant as to introduce the slight variations that will follow from calculating salaries to the active service by means of a salary scale and the age distribution of the present active service.

COMPARATIVE COSTS FOR DISABILITY PENSIONERS AND FOR SERVICE PENSIONERS.

We observe from Table XIV that when the pension system carries its ultimate normal load, the annual value of the disability pensions is \$34,714, while the annual value of the service pensions is \$877,661. Expressed as percentages of the total cost of all pensions, including those to widows and children, the disability pensions amount to 1.57

per cent of the total payments, while the service pensions amount to 39.7 per cent of the total pension payments.

COMPARATIVE COSTS FOR PENSIONS TO MEN AND TO THEIR WIDOWS.

We find from Table XIV that when the pension system carries its ultimate normal load, the annual value of pensions to men is \$912,375, while the value of widows' pensions is \$1,283,043. Expressed as percentages of all pensions, those to men amount to 41.3 per cent of all pension payments, while the pensions to widows amount to 58.1 per cent of the total of all pensions. The pensions to children amount to 0.6 per cent of all pensions.

COMPARATIVE COSTS FOR DIFFERENT CLASSES OF WIDOWS.

When the pension system carries its ultimate normal load, the pensions have an annual value of \$96,234 to widows of Class A, \$921,416 to widows of Class B, and \$265,393 to those of Class C. Expressed as percentages of the total cost of all pensions, the pensions to widows of Class A amount to 4.36 per cent, those to widows of Class B to 41.7 per cent, and those to widows of Class C to 12.0 per cent. (For definitions of these classes see p. 91.)

RESERVES FOR THE FUTURE FORCE.

The law of 1915 provides that a reserve fund shall be established and maintained for the payment of pensions to policemen (their widows and children) becoming members of the police force subsequent to January 1, 1916. The law does not specify any standards with respect to interest rate, mortality rate or withdrawal rate. It requires that one or more competent actuaries shall determine the amount necessary to establish and maintain such reserve funds. It seems clear that standards of solvency should be prescribed when adequate reserves are to be provided, just as surely as standards must be prescribed for legal reserves in life insurance. The present reserve provision is too loosely drawn to be practical.

PERCENTAGE OF SALARIES REQUIRED FROM FUTURE ENTRANTS TO PROVIDE PENSIONS IF THE PENSIONS WERE TOTALLY CONTRIBUTORY.

To pay for pensions in accord with rates given by the 10 years' experience from January 1, 1906, to January 1, 1916, and with all deductions from salaries accumulated at 4 per cent compound interest and with no returns of contributions in case of withdrawal or death, would require for men entering at age 29 a deduction of 13.6 per cent from salaries throughout the period of active service.

RESERVES ON THE BASIS OF EXPERIENCE.

If the city should add to the present contributions of employees about 11.6 per cent of salaries of new entrants, there would thus be produced a proper reserve fund for a sound pension system for such new entrants.

VALUATION BALANCE SHEET.

The balance sheet in Table XVI deals with assets and liabilities for those who are at present participants in the pension fund.

It excludes all consideration of future entrants into the service. It may be observed that the total payment of pensions to these participants will amount to \$73,091,631, of which \$1,851,066 will be contributed by these participants giving 2 per cent of their salaries, and also that \$120,847 constitutes the cash on hand.

A better way to inspect the balance sheet is to give attention to the present value of assets and liabilities. The present value, with a 4 per cent interest rate, of the liabilities for pensions is \$32,014,976. The present value of the contributions of 2 per cent of salaries is \$1,291,250. The cash on hand amounts to \$120,847. This means that the present value to the city of carrying out the pension system for present participants under the police fund amounts to \$30,602,879, if the city should assume the responsibility of carrying out this system.

TABLE XII—(Chicago Policemen).

Pensions accruing to persons on pension roll January 1, 1916.											Pensions accruing to widows of pensioners on the roll January 1, 1916.			
Date.	Service pension-ers.	Disability pension-ers.	Widows of Class A. ¹	Widows of Class B. ²	Widows of Class C. ³	Children pension-ers.	Total pen-sions entered upon.	Widows of Class A.	Widows of Class B.	Wid-ows of Class C.	Totals.			
1916.....	\$358,369	\$27,288	\$69,420	\$179,409	\$146,457	\$12,031	\$792,974	\$ 844	\$ 6,409	\$ 265	\$ 7,518			
1917.....	338,460	24,824	67,383	173,527	143,063	9,583	756,840	2,392	21,864	752	25,008			
1918.....	319,118	22,063	65,578	167,553	139,458	7,698	722,068	3,714	34,692	1,167	39,573			
1919.....	300,213	20,756	63,804	161,508	135,712	6,141	688,134	4,824	46,080	1,516	52,420			
1920.....	282,013	19,075	62,004	155,441	131,884	4,611	655,028	5,720	55,596	1,798	63,114			
1921.....	264,370	17,574	60,175	149,312	127,991	2,790	622,142	6,470	64,997	2,033	73,500			
1922.....	247,169	16,223	58,326	143,097	123,985	1,359	590,159	7,094	73,075	2,230	82,399			
1923.....	230,562	14,996	56,372	136,865	119,915	695	559,405	7,578	80,666	2,382	90,626			
1924.....	214,486	13,870	54,398	130,682	115,797	346	529,579	7,955	86,806	2,500	97,261			
1925.....	198,487	12,824	52,516	124,511	111,581	.....	499,919	8,258	92,075	2,585	102,928		
1926.....	183,628	11,838	50,601	118,407	107,378	.....	471,852	8,486	96,214	2,667	107,367		
1927.....	169,951	10,893	46,726	112,152	103,108	.....	444,775	8,653	96,534	2,719	110,906		
1928.....	156,469	9,983	46,726	106,061	98,692	.....	417,931	8,765	101,708	2,755	113,228		
1929.....	143,584	9,270	44,774	100,016	94,240	.....	391,884	8,840	102,968	2,778	114,586		
1930.....	130,806	8,575	43,106	94,087	89,756	.....	366,330	8,842	103,470	2,779	115,091		
1931.....	119,332	7,702	41,401	88,291	85,355	.....	342,071	8,810	103,146	2,769	114,725		
1932.....	108,074	6,845	39,369	82,633	80,750	.....	317,671	8,707	102,032	2,736	113,475		
1933.....	97,859	6,050	37,397	77,109	76,253	.....	294,668	8,545	100,284	2,686	111,515		
1934.....	88,256	5,314	35,407	71,669	71,775	.....	272,421	8,337	97,952	2,630	108,909		
1935.....	79,272	4,643	33,435	65,891	67,336	.....	250,577	8,085	94,885	2,541	105,511		
1936.....	63,045	3,426	31,397	60,787	62,947	.....	230,031	7,795	91,477	2,450	101,722		
1937.....	55,762	2,966	29,359	56,365	58,682	.....	210,915	7,449	87,570	2,341	97,360		
1938.....	49,512	2,521	27,366	51,622	54,481	.....	192,197	7,063	82,305	2,220	91,590		
1939.....	42,828	2,132	23,622	47,090	50,380	.....	174,949	6,642	77,577	2,087	86,506		
1940.....	37,193	1,783	21,835	42,768	46,329	.....	157,080	6,207	72,863	1,951	81,021		
1941.....	32,012	1,483	20,101	38,670	41,945	.....	141,431	5,752	67,834	1,808	75,394		
1942.....	27,257	1,223	18,434	34,814	38,711	.....	127,121	5,227	62,768	1,613	69,638		
1943.....	22,892	1,003	16,843	31,185	35,090	.....	113,189	4,814	57,746	1,513	64,073		
1944.....	19,101	829	15,335	27,700	31,652	.....	100,180	4,360	52,685	1,370	58,415		
1945.....	15,663	666	13,916	24,631	28,394	.....	88,290	3,920	47,672	1,232	52,824		
1946.....	12,709	540	12,573	21,709	25,324	.....	77,278	3,501	42,778	1,100	47,379		
1947.....	10,166	438	10,102	19,070	22,456	.....	67,348	3,073	38,055	966	42,094		
1948.....	8,007	356	8,007	16,618	19,796	.....	58,320	2,724	33,537	856	37,117		
1949.....	6,280	287	6,280	14,359	17,346	.....	50,202	2,407	29,356	756	32,519		
1950.....	4,730	226	4,730	12,343	15,106	.....	43,053	2,121	25,279	667	28,087		
1951.....	3,586	174	3,586	10,920	13,088	.....	36,605	1,847	21,530	580	23,957		
1952.....	2,887	131	2,887	8,920	11,234	.....	31,068	1,614	18,232	507	20,353		
1953.....	1,844	85	1,844	7,507	9,588	.....	26,154	1,411	15,213	443	17,007		
1954.....	.....	.....	.....	6,271	8,141	.....	21,926	1,231	12,597	387	14,215

1955.....	1,279	68	4,897	5,198	6,856	.....	18,298	1,064	10,176	334	11,574
1956.....	861	47	4,305	4,276	5,236	.....	14,725	935	8,157	294	9,382
1957.....	566	32	3,719	3,488	4,764	.....	12,569	812	6,355	255	7,426
1958.....	359	21	3,294	2,824	3,932	.....	10,430	713	4,929	224	5,863
1959.....	210	13	2,832	2,267	3,217	.....	8,539	610	3,748	192	4,550
1960.....	109	8	2,428	1,804	2,607	.....	6,956	523	2,778	164	3,465
1961.....	51	5	2,118	1,421	2,090	.....	5,691	441	2,056	139	2,636
1962.....	22	3	1,847	1,110	1,670	.....	4,652	376	1,451	118	1,945
1963.....	7	1	1,606	857	1,320	.....	3,791	314	1,015	99	1,498
1964.....	2	.....	1,363	683	1,034	.....	3,052	261	684	82	1,027
1965.....	.....	.....	1,177	492	805	.....	2,474	212	454	67	733
1966.....	.....	.....	1,043	365	630	.....	2,028	179	282	56	517
1967.....	.....	.....	896	298	472	.....	1,636	135	172	42	349
1968.....	.....	.....	767	194	358	.....	1,319	106	97	33	236
1969.....	.....	.....	653	138	266	.....	1,057	80	51	25	156
1970.....	.....	.....	564	97	192	.....	853	60	28	19	107
1971.....	.....	.....	493	67	138	.....	698	43	12	14	69
1972.....	.....	.....	427	47	98	.....	572	30	5	9	44
1973.....	.....	.....	365	33	68	.....	466	21	1	7	29
1974.....	.....	.....	307	21	374	.....	374	13	.....	4	17
1975.....	.....	.....	255	14	46	.....	301	8	.....	3	11
1976.....	.....	.....	209	7	32	.....	236	5	.....	2	7
1977.....	.....	.....	168	3	12	.....	183	3	.....	1	4
1978.....	.....	.....	133	1	7	.....	141	1	.....	.....	1
1979.....	.....	.....	102	.....	4	.....	106	.....	.....	.....	.....
1980.....	.....	.....	77	.....	2	.....	79	.....	.....	.....	.....
1981.....	.....	.....	55	.....	2	.....	57	.....	.....	.....	.....
1982.....	.....	.....	39	.....	1	.....	40	.....	.....	.....	.....
1983.....	.....	.....	25	.....	.....	.....	25	.....	.....	.....	.....
1984.....	.....	.....	15	.....	.....	.....	15	.....	.....	.....	.....
1985.....	.....	.....	8	.....	.....	.....	8	.....	.....	.....	.....
1986.....	.....	.....	5	.....	.....	.....	5	.....	.....	.....	.....
1987.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....
1988.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	\$4,519,972	\$295,752	\$1,380,915	\$2,996,907	\$2,797,011	\$45,184	\$12,035,741	\$227,024	\$2,543,978	\$71,348	\$2,842,350
Present values	\$3,243,384	\$217,632	\$865,788	\$1,997,742	\$1,797,919	\$41,042	\$8,163,507	\$120,866	\$1,342,537	\$37,985	\$1,501,388
Interest 4 per cent.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Widows of Class A are those whose husbands died in performance of duty, or from injuries received in performance of duty.
² Widows of Class B are those whose husbands were either service pensioners or active members of the force at death, after at least 20 years of service.

³ Widows of Class C—Remaining widows—these include widows whose husbands died from any cause other than injuries received in performance of duty within more than 10, but less than 20, years of service, and the small subclass whose husbands, though disabled, did not receive injuries directly in performance of duty.

TABLE XIII.—(Chicago Policemen).
PENSIONS ACCRUING TO MEMBERS OF ACTIVE FORCE JANUARY 1, 1916, AND TO THEIR WIDOWS AND CHILDREN.

Date.	Service pensioners.	Disability pensioners.	Widows of Class A*.	Widows of Class B*.	Widows of Class C*.	Children pensioners.	Total pensions to active force and dependents.	Salary payments to active service of Jan 1, 1916.	Amount of 2 per cent contributions.
1916.....	\$ 30,601	\$ 1,469	\$ 809	\$ 14,093	\$ 5,253	\$ 1,784	\$ 54,009	\$6,321,237	\$126,425
1917.....	87,118	4,180	2,461	40,865	15,702	4,232	154,558	6,066,860	121,337
1918.....	146,050	6,608	4,233	71,382	26,176	6,117	260,566	5,813,580	116,272
1919.....	222,703	8,832	6,149	102,523	35,963	7,674	363,874	5,560,270	110,205
1920.....	253,807	10,681	8,160	135,161	45,569	9,184	462,562	5,308,249	106,165
1921.....	303,619	12,477	10,044	168,046	56,126	11,060	561,372	5,059,702	101,194
1922.....	350,443	14,075	12,239	199,860	66,193	12,406	655,216	4,815,072	96,301
1923.....	393,916	15,489	14,331	230,941	76,032	12,985	743,694	4,574,322	91,486
1924.....	436,047	16,748	16,338	264,167	86,082	13,384	832,786	4,337,253	86,745
1925.....	477,371	18,144	18,864	296,088	96,752	13,707	919,926	4,103,612	82,072
1926.....	513,386	19,336	20,619	327,817	106,817	13,663	999,648	3,873,132	77,463
1927.....	543,471	20,189	22,467	359,116	113,594	13,658	1,072,505	3,645,371	72,907
1928.....	573,969	20,732	24,365	390,554	121,778	13,632	1,145,040	3,420,084	68,402
1929.....	601,161	21,222	25,893	420,837	128,974	13,605	1,211,692	3,197,178	63,944
1930.....	626,998	21,591	27,453	449,358	135,360	13,577	1,274,337	2,963,804	59,336
1931.....	649,805	21,869	28,825	480,086	142,194	13,548	1,336,327	2,759,310	55,186
1932.....	670,835	22,066	29,997	506,630	146,407	13,490	1,389,425	2,545,385	50,908
1933.....	692,776	22,118	31,282	535,712	150,804	13,400	1,446,092	2,335,801	46,716
1934.....	712,542	22,038	32,301	562,086	153,490	13,275	1,495,732	2,136,535	42,571
1935.....	728,735	21,834	33,152	587,195	155,595	13,115	1,539,686	1,932,319	38,646
1936.....	740,949	21,487	33,806	610,891	156,801	12,915	1,576,849	1,739,722	34,794
1937.....	760,812	21,130	34,273	632,696	157,001	12,761	1,611,111	1,534,424	31,088
1938.....	783,258	20,543	34,566	653,802	156,741	12,535	1,638,969	1,377,521	27,550
1939.....	801,777	19,901	34,734	671,720	155,465	12,300	1,665,897	1,210,570	24,211
1940.....	821,689	19,184	34,682	687,001	153,664	12,115	1,690,375	1,053,623	21,072
1941.....	842,160	18,306	34,449	699,981	151,334	11,861	1,688,091	908,516	18,170
1942.....	865,611	17,567	34,113	710,223	148,367	11,533	1,687,414	775,521	15,510
1943.....	887,441	16,756	33,542	717,695	144,984	11,165	1,681,583	654,971	13,069
1944.....	907,910	15,721	32,861	722,533	141,277	10,725	1,667,027	547,005	10,940
1945.....	926,884	14,809	32,084	724,537	137,218	10,215	1,645,747	451,470	9,029
1946.....	946,975	13,833	31,168	723,840	132,773	9,724	1,618,313	387,908	7,358
1947.....	968,842	12,898	30,189	719,914	127,884	9,215	1,580,952	295,650	5,913
1948.....	992,121	12,030	28,973	713,200	123,086	8,736	1,540,146	233,977	4,670
1949.....	1,016,670	11,075	27,940	703,701	117,879	8,115	1,493,380	182,126	3,643
1950.....	1,042,725	10,115	26,789	691,200	112,472	7,569	1,440,870	139,262	2,785
1951.....	1,069,911	9,246	25,528	676,126	106,927	7,065	1,383,803	104,465	2,089
1952.....	1,098,879	8,406	24,232	658,355	101,356	6,445	1,322,592	76,754	1,535
1953.....	1,129,862	7,586	22,956	639,051	96,477	5,735	1,258,687	55,154	1,103
1954.....	1,162,813	6,809	21,631	616,561	89,676	5,105	1,191,595	38,706	774
1955.....	1,197,271	6,066	20,361	592,479	83,876	4,415	1,122,458	26,476	530
1956.....	1,234,583	5,352	18,992	566,524	78,059	3,899	1,053,409	17,673	353

1957.....	343,767	4,680	17,084	539,336	72,728	3,531	981,069	11,453	229
1958.....	309,294	4,055	16,370	510,381	66,614	2,715	909,429	7,186	144
1959.....	276,149	3,475	15,093	481,102	61,083	2,295	839,197	4,348	87
1960.....	244,496	2,948	13,881	451,582	55,622	1,875	770,404	2,502	50
1961.....	214,663	2,473	12,676	421,151	50,050	1,515	702,528	1,348	27
1962.....	186,753	2,048	11,496	390,189	45,324	1,171	636,981	673	13
1963.....	160,488	1,675	10,383	359,396	40,504	815	573,261	345	7
1964.....	136,412	1,358	9,332	328,459	35,917	515	511,993	102	2
1965.....	114,538	1,085	8,404	297,822	31,606	415	453,870	23	
1966.....	94,885	832	7,385	267,653	27,377	300	398,652	2	
1967.....	77,453	661	6,327	238,761	23,852	245	347,529		
1968.....	62,204	503	5,723	210,939	20,428	215	300,032		
1969.....	48,216	374	4,993	184,437	17,319	185	255,524		
1970.....	37,465	269	4,324	159,414	14,517	165	216,154		
1971.....	28,408	190	3,728	136,184	12,022	145	180,677		
1972.....	21,082	135	3,187	114,869	9,832	125	149,230		
1973.....	15,210	93	2,709	95,564	7,924	105	121,605		
1974.....	10,588	60	2,297	78,343	6,295	85	97,658		
1975.....	7,136	39	1,913	63,204	4,918	65	77,275		
1976.....	4,408	23	1,590	50,118	3,795	45	59,979		
1977.....	3,574	18	1,311	38,997	2,840	30	46,770		
1978.....	1,373	11	1,083	30,452	2,094	15	35,028		
1979.....	634	6	885	22,195	1,506		25,226		
1980.....	231	3	710	16,184	1,052		18,190		
1981.....	61	1	565	11,535	713		12,875		
1982.....	9	1	439	7,999	460		8,908		
1983.....			343	5,379	384		6,106		
1984.....			244	3,482	158		3,884		
1985.....			173	2,144	86		2,403		
1986.....			117	1,240	41		1,398		
1987.....			75	661	17		753		
1988.....			44	317	6		367		
1989.....			24	130	2		156		
1990.....			12	46			58		
1991.....			5	14			19		
1992.....			2	4			6		
1993.....			1				1		
Totals.....	\$25,038,113	\$637,533	\$1,153,609	\$25,794,272	\$5,151,993	\$438,020	\$58,213,540	\$92,603,554	\$1,851,066
Present values.....	\$10,178,049	\$300,249	\$443,639	\$8,855,361	\$2,066,779	\$298,482	\$22,136,763		\$1,266,175
Interest 4 per cent.									

* For definitions of these classes see p. 91.

TABLE XIV—(Chicago Policemen).
TABLE SHOWING THE ANNUAL AMOUNTS OF PENSION AND SALARY PAYMENTS TO BE MADE TO 219 PERSONS ENTERING EACH YEAR INTO THE SERVICE OF THE CHICAGO POLICE FORCE AT AN AVERAGE AGE, 29 YEARS, TO MAINTAIN A PERMANENT STAFF OF PRESENT SIZE—AND TO THEIR WIDOWS AND CHILDREN.

Year.	Service pensioners.	Disability pensioners.	Widows of Class A*.	Widows of Class B*.	Widows of Class C*.	Children pensioners.	Total pension payments on account of future entrants to police force.	Total salary payments on account of future entrants.
1916.....		\$ 0	\$ 0				\$ 0	\$ 125,657
1917.....		0	25				25	379,034
1918.....		29	101				130	633,314
1919.....		108	237				345	886,624
1920.....		231	436			\$ 20	687	1,138,645
1921.....		305	710			35	1,140	1,387,192
1922.....		600	1,065			50	1,715	1,631,822
1923.....		851	1,500			65	2,416	1,872,572
1924.....		1,149	2,021			85	3,255	2,109,639
1925.....		1,492	2,631			108	4,231	2,343,282
1926.....		2,091	3,334			132	5,557	2,573,762
1927.....		2,719	4,134		\$ 1,563	157	6,573	2,801,523
1928.....		3,384	5,030		3,550	183	12,147	3,026,810
1929.....		4,088	6,022		6,071	210	16,391	3,249,716
1930.....		4,830	7,119		9,347	238	21,534	3,470,090
1931.....		5,627	8,313		13,433	267	27,640	3,687,584
1932.....		6,469	9,607		18,283	325	34,684	3,901,509
1933.....		7,356	11,009		23,839	415	42,619	4,111,091
1934.....		8,361	12,514		30,041	540	51,456	4,318,359
1935.....		9,260	14,131		36,798	700	60,889	4,514,575
1936.....		10,274	15,863		44,030	900	71,067	4,707,172
1937.....	\$ 10,730	11,333	17,706	\$ 5,918	51,632	1,054	98,373	4,892,470
1938.....	18,103	12,429	19,597	10,183	59,556	1,280	121,148	5,069,373
1939.....	30,552	13,567	21,713	17,052	67,726	1,515	152,125	5,236,324
1940.....	45,642	14,744	23,871	26,208	76,052	1,700	188,217	5,393,271
1941.....	63,523	15,948	26,212	36,762	84,494	1,954	228,893	5,538,378
1942.....	84,367	17,160	28,458	49,174	93,017	2,280	274,456	5,671,373
1943.....	108,095	18,367	30,871	63,510	101,587	2,650	325,080	5,791,923
1944.....	134,668	19,538	33,546	79,814	110,170	3,090	380,646	5,899,889
1945.....	163,903	20,722	35,865	98,080	118,732	3,600	440,902	5,995,424
1946.....	195,537	21,846	38,407	118,310	127,242	4,091	505,433	6,078,986
1947.....	229,266	22,922	40,965	141,016	135,668	4,600	574,436	6,151,244
1948.....	264,726	23,946	43,510	164,381	143,987	5,079	645,629	6,212,917
1949.....	301,557	24,921	46,034	190,063	152,176	5,700	720,451	6,264,768
1950.....	339,367	25,846	48,533	217,362	160,191	6,246	797,547	6,307,632
1951.....	377,746	26,725	51,006	246,141	168,016	6,750	876,384	6,342,429
1952.....	416,269	27,562	53,381	276,294	175,627	7,370	956,503	6,370,140
1953.....	454,530	28,353	55,833	307,638	183,009	8,080	1,037,443	6,391,740
1954.....	492,142	29,099	58,186	339,985	190,141	8,710	1,118,263	6,408,188
1955.....	528,763	29,800	60,496	373,035	196,998	9,400	1,198,492	6,420,418
1956.....	564,080	30,454	62,759	406,624	203,559	9,916	1,277,392	6,429,221
1957.....	597,845	31,052	64,978	440,497	209,810	10,500	1,354,682	6,435,441
1958.....	629,854	31,604	67,213	474,412	215,741	11,100	1,429,924	6,439,708
1959.....	659,971	32,097	69,264	508,125	221,343	11,520	1,502,320	6,442,546
1960.....	688,105	32,536	71,322	541,405	226,608	11,940	1,571,916	6,444,392
1961.....	714,197	32,922	73,335	575,181	231,531	12,300	1,639,466	6,445,546
1962.....	738,211	33,258	75,285	605,957	236,109	12,644	1,701,464	6,446,221
1963.....	760,010	33,547	77,166	636,538	240,340	13,000	1,760,601	6,446,549
1964.....	779,612	33,793	78,972	666,043	244,224	13,300	1,815,944	6,446,792
1965.....	797,077	33,998	80,694	694,172	247,425	13,400	1,866,766	6,446,871
1966.....	812,441	34,168	82,333	720,768	250,296	13,500	1,913,506	6,446,892
1967.....	825,781	34,305	83,881	745,861	252,847	13,570	1,956,245	6,446,894
1968.....	837,193	34,415	85,333	769,318	255,091	13,600	1,994,950	6,446,894
1969.....	846,797	34,499	86,688	791,024	257,043	13,630	2,029,681	6,446,894
1970.....	854,726	34,564	87,942	810,894	258,721	13,650	2,060,497	6,446,894
1971.....	861,136	34,612	89,070	828,873	260,145	13,670	2,087,506	6,446,894
1972.....	866,190	34,647	90,140	844,939	261,337	13,690	2,110,943	6,446,894
1973.....	870,054	34,671	91,084	859,105	262,319	13,710	2,130,943	6,446,894
1974.....	872,891	34,687	91,701	871,422	263,115	13,730	2,147,546	6,446,894
1975.....	874,869	34,698	92,671	881,972	263,748	13,750	2,161,708	6,446,894
1976.....	876,161	34,704	93,319	890,865	264,239	13,770	2,173,058	6,446,894
1977.....	876,942	34,710	93,879	898,226	264,612	13,785	2,182,154	6,446,894
1978.....	877,367	34,713	94,357	904,221	264,886	13,800	2,189,344	6,446,894
1979.....	877,566	34,714	94,765	908,993	265,080	13,815	2,194,933	6,446,894
1980.....	877,639	34,714	95,093	912,707	265,211	13,815	2,199,179	6,446,894
1981.....	877,658	34,714	95,369	915,522	265,295	13,815	2,202,373	6,446,894
1982.....	877,661	34,714	95,593	917,590	265,345	13,815	2,204,478	6,446,894

* For definitions of these classes see p. 91.

TABLE XIV—Concluded.

Year.	Service pensioners.	Disability pensioners.	Widows of Class A.	Widows of Class B.	Widows of Class C.	Children pensioners.	Total pension payments on account of future entrants to police force.	Total salary payments on account of future entrants.
1983....	\$877,661	\$34,714	\$95,772	\$919,054	\$265,372	\$13,815	\$2,206,388	\$6,446,894
1984....	877,661	34,714	95,909	920,444	265,385	13,815	2,207,928	6,446,894
1985....	877,661	34,714	96,092	920,676	265,390	13,815	2,208,348	6,446,894
1986....	877,661	34,714	96,092	921,052	265,392	13,815	2,208,726	6,446,894
1987....	877,661	34,714	96,146	921,256	265,393	13,815	2,208,985	6,446,894
1988....	877,661	34,714	96,184	921,356	265,393	13,815	2,209,123	6,446,894
1989....	877,661	34,714	96,221	921,396	265,393	13,815	2,209,200	6,446,894
1990....	877,661	34,714	96,233	921,411	265,393	13,815	2,209,227	6,446,894
1991....	877,661	34,714	96,234	921,416	265,393	13,815	2,209,233	6,446,894
1992....	877,661	34,714	96,234	921,416	265,393	13,815	2,209,233	6,446,894
1993....	877,661	34,714	96,234	921,416	265,393	13,815	2,209,233	6,446,894
Totals.	\$35,505,791	\$1,769,526	\$4,161,351	\$32,913,073	\$12,218,286	\$594,279	\$87,162,306	\$410,243,176

TABLE XV—(Chicago Policemen).

SHOWING THE COMBINED ANNUAL PENSION PAYMENTS TO ALL CLASSES, AND THE PERCENTAGES THESE PAYMENTS ARE OF THE TOTAL SALARIES. THIS TABLE IS FORMED BY COMBINING RESULTS IN TABLES XII, XIII, AND XIV, AND INCLUDES ALL PAYMENTS OF PENSIONS TO PRESENT ACTIVE SERVICE, PRESENT PENSIONERS, FUTURE ENTRANTS, AND TO WIDOWS AND CHILDREN.

Date.	Pensions to present pensioners and to their widows and children.	Pensions to persons now in active service and to their widows and children.	Pensions to future entrants into service and to their widows and children.	Grand totals of all pensions.	Ratios of pension payments to salaries expressed in percentages.	Percentages contributed by employees.	Percentages contributed by city and unprovided for.
1916.....	\$800,492	\$ 54,009	\$ 0	\$ 854,501	13.3	2.0	11.3
1917.....	781,848	154,558	25	936,431	14.5	2.0	12.5
1918.....	761,641	260,566	130	1,022,337	15.9	2.0	13.9
1919.....	740,554	363,874	345	1,104,773	17.1	2.0	15.1
1920.....	718,142	462,562	687	1,181,391	18.3	2.0	16.3
1921.....	695,642	561,372	1,140	1,258,154	19.5	2.0	17.5
1922.....	672,558	655,216	1,715	1,329,489	20.6	2.0	18.6
1923.....	650,031	743,694	2,416	1,396,141	21.7	2.0	19.7
1924.....	626,840	832,786	3,255	1,462,881	22.7	2.0	20.7
1925.....	602,847	919,926	4,231	1,527,004	23.7	2.0	21.7
1926.....	579,219	999,648	5,557	1,584,424	24.6	2.0	22.6
1927.....	555,681	1,072,505	8,573	1,636,759	25.4	2.0	23.4
1928.....	531,159	1,145,040	12,147	1,688,346	26.2	2.0	24.2
1929.....	506,470	1,211,692	16,391	1,734,553	26.9	2.0	24.9
1930.....	481,421	1,274,337	21,534	1,777,292	27.6	2.0	25.6
1931.....	456,706	1,336,327	27,640	1,820,763	28.2	2.0	26.2
1932.....	431,146	1,389,425	34,684	1,855,255	28.8	2.0	26.8
1933.....	406,183	1,446,092	42,619	1,894,894	29.4	2.0	27.4
1934.....	381,330	1,495,752	51,456	1,928,518	29.9	2.0	27.9
1935.....	356,088	1,539,686	60,889	1,956,663	30.4	2.0	28.4
1936.....	331,753	1,576,849	71,067	1,979,669	30.7	2.0	28.7
1937.....	308,275	1,611,111	98,373	2,017,759	31.3	2.0	29.3
1938.....	283,787	1,638,999	121,148	2,043,934	31.7	2.0	29.7
1939.....	261,255	1,665,897	152,125	2,079,277	32.3	2.0	30.3
1940.....	238,701	1,680,375	188,217	2,107,293	32.7	2.0	30.7
1941.....	216,825	1,688,091	228,893	2,133,809	33.1	2.0	31.1
1942.....	196,759	1,687,414	274,456	2,158,629	33.5	2.0	31.5
1943.....	177,262	1,681,583	325,080	2,183,925	33.9	2.0	31.9
1944.....	158,505	1,667,027	380,646	2,206,268	34.2	2.0	32.2
1945.....	141,114	1,645,747	440,902	2,227,763	34.6	2.0	32.6
1946.....	124,657	1,618,313	505,433	2,248,403	34.9	2.0	32.9
1947.....	109,442	1,580,952	574,437	2,264,831	35.1	2.0	33.1
1948.....	95,437	1,540,146	645,629	2,281,212	35.4	2.0	33.4
1949.....	82,721	1,493,380	720,451	2,296,552	35.6	2.0	33.6
1950.....	71,120	1,440,870	797,547	2,309,537	35.8	2.0	33.8
1951.....	60,562	1,383,803	876,384	2,320,749	36.0	2.0	34.0
1952.....	51,419	1,322,592	956,503	2,330,514	36.1	2.0	34.1
1953.....	43,221	1,258,687	1,037,443	2,339,351	36.3	2.0	34.3

TABLE XV—Concluded.

Date.	Pensions to present pensioners and to their widows and children.	Pensions to persons now in active service and to their widows and children.	Pensions to future entrants into service and to their widows and children.	Grand totals of all pensions.	Ratios of pension payments to salaries expressed in percentages.	Percentages contributed by employees.	Percentages contributed by city and unprovided for.
1954.....	\$36,141	\$1,191,595	\$1,118,263	\$2,345,999	36.4	2.0	34.4
1955.....	29,872	1,122,458	1,198,492	2,350,822	36.5	2.0	34.5
1956.....	24,111	1,053,409	1,277,392	2,354,912	36.5	2.0	34.5
1957.....	19,991	981,069	1,354,682	2,355,742	36.5	2.0	34.5
1958.....	16,296	909,429	1,429,924	2,355,649	36.5	2.0	34.5
1959.....	13,089	839,197	1,502,320	2,354,606	36.5	2.0	34.5
1960.....	10,421	770,404	1,571,916	2,352,741	36.5	2.0	34.5
1961.....	8,327	702,528	1,639,466	2,350,321	36.5	2.0	34.5
1962.....	6,597	636,981	1,701,464	2,345,042	36.4	2.0	34.4
1963.....	5,219	573,261	1,760,601	2,339,081	36.3	2.0	34.3
1964.....	4,079	511,993	1,815,944	2,332,016	36.2	2.0	34.2
1965.....	3,207	453,870	1,866,766	2,323,843	36.0	2.0	34.0
1966.....	2,545	398,652	1,913,506	2,314,703	35.9	2.0	33.9
1967.....	1,985	347,529	1,956,245	2,305,759	35.8	2.0	33.8
1968.....	1,555	300,032	1,994,950	2,296,537	35.6	2.0	33.6
1969.....	1,213	255,524	2,029,681	2,286,418	35.5	2.0	33.5
1970.....	960	216,154	2,060,497	2,277,611	35.3	2.0	33.3
1971.....	767	180,677	2,087,506	2,268,950	35.2	2.0	33.2
1972.....	616	149,230	2,110,943	2,260,789	35.0	2.0	33.0
1973.....	495	121,605	2,130,943	2,253,043	34.9	2.0	32.9
1974.....	391	97,658	2,147,546	2,245,595	34.8	2.0	32.8
1975.....	312	77,275	2,161,708	2,239,295	34.7	2.0	32.7
1976.....	243	59,979	2,173,058	2,233,280	34.6	2.0	32.6
1977.....	187	46,770	2,182,154	2,229,111	34.6	2.0	32.6
1978.....	142	35,028	2,189,344	2,224,514	34.5	2.0	32.5
1979.....	106	25,226	2,194,933	2,220,265	34.4	2.0	32.4
1980.....	79	18,190	2,199,179	2,217,448	34.4	2.0	32.4
1981.....	57	12,875	2,202,373	2,215,305	34.4	2.0	32.4
1982.....	40	8,908	2,204,718	2,213,666	34.3	2.0	32.3
1983.....	25	6,106	2,206,388	2,212,519	34.3	2.0	32.3
1984.....	15	3,884	2,207,928	2,211,827	34.3	2.0	32.3
1985.....	8	2,403	2,208,348	2,210,759	34.3	2.0	32.3
1986.....	5	1,398	2,208,726	2,210,129	34.3	2.0	32.3
1987.....	2	753	2,208,985	2,209,740	34.3	2.0	32.3
1988.....	.....	367	2,209,123	2,209,490	34.3	2.0	32.3
1989.....	.....	156	2,209,200	2,209,356	34.3	2.0	32.3
1990.....	.....	58	2,209,227	2,209,285	34.3	2.0	32.3
1991.....	.....	19	2,209,233	2,209,252	34.3	2.0	32.3
1992.....	.....	6	2,209,233	2,209,239	34.3	2.0	32.3
1993.....	.....	1	2,209,233	2,209,234	34.3	2.0	32.3
Totals...	\$14,878,091	\$58,213,540	\$87,162,306	\$160,253,937	.....	.....	.....

Liabilities.

Assets.

	Liabilities.			Assets.		
	Total amount of payments to be made.	Present value of payments to be made. Interest 4 per cent.	Difference due to interest.	Total payments to be received or on hand.	Present value of payments to be received or on hand. Interest 4 per cent.	Difference due to interest.
Pensions to 555 pensioners now on service pension roll.....	\$4,519,972	\$3,243,384	\$1,276,588	Employees' contributions of 2 per cent of salaries.....		
Pensions to 46 pensioners now on disability pension roll.....	295,752	217,632	78,120	Cash on hand January 1, 1916.	\$1,851,066	\$ 559,816
Pensions to 123 widows of Class A now on pension roll.....	1,380,915	865,788	515,127	To be provided from other sources than employees' contributions of 2 per cent of salaries.....	120,847	
Pensions to 278 widows of Class B now on pension roll.....	2,996,907	1,997,742	999,165			
Pensions to 255 widows of Class C now on pension roll.....	2,797,011	1,797,919	999,092			
Pensions to 22 families of children now on pension roll.....	45,184	41,042	4,142			
Total pensions entered upon	\$12,035,741	\$8,163,507	\$3,872,234			
Pensions to present members of the active force retiring on service pensions.....	\$25,038,113	\$10,379,625	\$14,658,488			
Pensions to present members of active force retiring on disability pensions.....	637,533	306,195	331,338			
Pensions to widows of Class A whose husbands are at present on pension roll.....	227,024	120,866	106,158			
Pensions to widows of Class B whose husbands are at present on pension roll.....	2,543,978	1,342,537	1,201,441			
Pensions to widows of Class C whose husbands are at present on pension roll.....	71,348	37,985	33,363			
Pensions to widows of Class A from husbands of present active force.	1,153,609	443,639	709,970			
Pensions to widows of Class B from husbands of present active force.	25,794,272	8,855,361	16,938,911			
Pensions to widows of Class C from husbands of present active force.	5,151,983	2,066,779	3,085,214			
Pensions to children of present pensioners and to children of members of present active force.....	438,020	298,482	139,538			
Total pensions not entered upon.....	\$61,055,890	\$23,851,469	\$37,204,421			
Grand totals.....	\$73,091,631	\$32,014,976	\$41,076,655	\$73,091,631	\$32,014,976	\$41,076,655

For definitions of classes see p. 91.

THE FIREMEN'S FUND OF CHICAGO.

THE BENEFITS.

The following outline gives in brief form a notion of the benefits:
To Employees.

Service pensions: Pension of one-half of salary at time of retirement is paid to all who choose to retire after 20 years of service.

Disability pensions: Pension of one-half of final salary is awarded without service requirement if a member is disabled.

To Families of Employees.

Widow whose husband dies from any cause while in the fire service, or during retirement after 20 years of service, receives \$45 per month while unmarried.

Each natural child under 16 years of age, whose father dies from any cause while in the fire service, or during retirement after 20 years of service, receives \$8 per month if the mother is living, and \$15 per month if the mother is not living. The payment of pension to a child continues until the child is 16 years old.

If the deceased fireman leaves no widow, or natural child or children, surviving him, but leaves a dependent natural father or mother, then such dependent father or mother receives the sum of \$25 each, monthly, provided it is proved that the deceased fireman at the time of his death was the sole and only support of such parent or parents.

EXPLANATORY NOTE.

Tables XVII, XVIII and XIX, pp. 104 and 105 respectively, give a summary of the results of the tabulation of the data collected. They correspond to Tables I, II and III, pp. 83 and 84, respectively, in the case of the Chicago police fund.

TABLE XVII—(Chicago Firemen).

ACTUAL EXPERIENCE WITH THOSE WHO HAVE BEEN IN ACTIVE SERVICE WITHIN THE PERIOD OF JANUARY 1, 1906, AND JANUARY 1, 1916.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Age.	Survivors of Jan. 1, 1906, on active force Jan. 1, 1916, with ages as of Jan. 1, 1906.	Survivors of Jan. 1, 1906, not on active force Jan. 1, 1916, with ages as of Jan. 1, 1906.	Entrants still on active force, with ages at entrance.	Entrants withdrawn from active force before Jan. 1, 1916, with ages at entrance.	Withdrawals by resignation or dismissal, with ages at withdrawal.	Deaths in line of duty, with ages at death.	Other deaths, with ages at death.	Disability retirements from injuries in line of duty, with ages at retirement.	Other disability retirements, with ages at retirement.	Service retirements, with ages at retirement.	Total decrements, Cols. (6) + (7) + (8) + (9) + (10) + (11).	Existing Jan. 1, 1916, on active list with ages as of Jan. 1, 1916.	Married men on active force Jan. 1, 1916.
21.....	4	1	6	3	2	.....	.....	.....	.....	.....	2	.....	.....
22.....	3	0	84	16	0	.....	.....	.....	.....	.....	0	.....	.....
23.....	8	1	112	21	3	.....	.....	.....	.....	.....	3	6	1
24.....	7	8	141	32	10	.....	.....	.....	.....	.....	10	17	5
25.....	16	10	106	24	15	.....	.....	.....	.....	.....	18	30	12
26.....	17	9	99	26	25	.....	.....	.....	1	.....	29	39	18
27.....	37	10	101	23	24	2	3	.....	0	.....	29	46	28
Etc.			Detail	for	each	age.							
Totals....	907	473	1,066	228	272	40	115	46	30	198	701	1,973	1,619

TABLE XVIII—(Chicago Firemen).
ACTUAL EXPERIENCE WITH SERVICE PENSIONERS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Survivors of Jan. 1, 1906, still on roll Jan. 1, 1916, with ages as of 1906.	Deaths among survivors of 1906, with ages at death.	Returns to service, of survivors of Jan. 1, 1906, with ages at return.	Entrants to pension still on roll Jan. 1, 1916, with ages at entrance.	Deaths among entrants to pension, with ages at death.	Returns to service of entrants to pension, with ages at return.	Existing on roll Jan. 1, 1916, with ages as of Jan. 1, 1916.
40.....						1	
41.....							
42.....							
43.....				5			
44.....				6			3
45.....	1			5	1	1	4
46.....	1			9	2		4
47.....				11		1	4
Etc.		Detail for	each age.				
Totals....	20	30	1	144	41	14	164

TABLE XIX—(Chicago Firemen).
ACTUAL EXPERIENCE WITH DISABILITY PENSIONERS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Survivors of Jan. 1, 1906, still on roll Jan. 1, 1916, with ages as of Jan. 1, 1906.	Deaths among survivors of 1906, with ages at death.	Returns to service, with ages at return.	Entrants still on roll Jan. 1, 1916, with ages at entrance.	Deaths among entrants to pension, with ages at death.	Returns to service of entrants to pension, with ages at return.	Existing on roll Jan. 1, 1916, with ages as of Jan. 1, 1916.
25.....					1		
26.....				1			
27.....							
28.....							
29.....				2	1		
30.....	1						
31.....				4			
32.....							1
33.....				2		1	
Etc.			Detail for	each age.			
Totals....	25	11	1	58	14	1	83

DETERMINATION OF RATES OF CHANGES ON WHICH COSTS OF PENSIONS DEPENDS.

The following table, Table XX, p. 106, is similar to Table IV, p. 85, for the Chicago police fund, in that it gives the rates and probabilities resulting from a graduation of rates obtained from the actual experience.

As in the case of the Chicago police fund, in dealing with the probable future cost for widows, we need to know what the probabilities are that men of various classes and ages will leave widows eligible to a pension. For this purpose, we calculated the probability that a man dying at a given age will leave a widow, and the probability that a man dying in active service will have had at least 20 years of service. These results are also given in Table XX, p. 106.

TABLE XXIII—(Chicago Firemen).
AVERAGE TIME DISABILITY PENSIONERS OF GIVEN AGE HAVE BEEN
ON THE PENSION ROLL.
(Graduated Values).

Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)	Present age.	Average time on pension roll. (Years.)
32.....	1.75	42	5.0	52	7.9	62	11.7	72	17.2	82	25.2
33.....	2.0	43	5.2	53	8.3	63	12.1	73	18.0	83	26.1
34.....	2.2	44	5.5	54	8.6	64	12.5	74	18.7	84	27.0
35.....	2.5	45	5.7	55	9.0	65	13.0	75	19.5		
36.....	2.8	46	6.0	56	9.3	66	13.5	76	20.2		
37.....	3.2	47	6.4	57	9.6	67	14.1	77	21.0		
38.....	3.5	48	6.7	58	10.0	68	14.7	78	21.8		
39.....	3.9	49	7.1	59	10.4	69	15.2	79	22.6		
40.....	4.3	50	7.2	60	10.8	70	15.7	80	23.4		
41.....	4.7	51	7.5	61	11.2	71	16.5	81	24.3		

On account of the inadequacy of the data, we were compelled to use for rates of mortality among pensioners rates other than those derived from the experience of the fund. After having made comparisons with various experiences, we concluded that we would be justified in using the same rates of mortality as were used for retired policemen and their dependents, and accordingly they were adopted.

ACTIVE SERVICE TABLE AND SALARY AND PENSION SCALES.

The rates given in Table XX, p. 106, were used to construct the active service table (Table XXIV, below).

The salary and pension scales were prepared as in the case of the Chicago police fund.

TABLE XXIV—(Chicago Firemen).

ACTIVE SERVICE TABLE, AND SALARY AND PENSION SCALES.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	Total decrements. Cols. (3) + (4) + (5) + (6) + (7).	Salary from active service Jan. 1, 1916.	Pension scale for males as of age at entrance for future entrants.
Age.	Active service.	Withdrawals.	Dying in line of duty.	Other deaths.	Disability retirements.	Service retirements.			
21..	100,000	3,470	120	320	120	.....	4,030	.....	.....
22..	95,970	3,292	115	317	120	.....	3,844	.....	.....
23..	92,126	3,114	111	312	120	.....	3,657	\$1,080	\$540
24..	88,469	2,946	106	310	119	.....	3,481	1,174	587
25..	84,988	2,779	102	307	119	.....	3,307	1,222	611
26..	81,681	2,622	123	304	119	.....	3,168	1,260	630
27..	78,513	2,450	135	305	122	.....	3,012	1,286	643
28..	75,501	2,280	140	306	137	.....	2,863	1,312	656
29..	72,638	2,092	142	307	150	.....	2,691	1,338	669
30..	69,947	1,931	141	308	176	.....	2,556	1,356	678
31..	67,391	1,759	141	310	209	.....	2,419	1,374	687
32..	64,972	1,592	140	312	229	.....	2,273	1,386	693
33..	62,699	1,379	138	317	245	.....	2,079	1,402	701
34..	60,620	1,176	136	322	256	.....	1,890	1,418	709
35..	58,730	998	134	329	264	.....	1,725	1,434	717
36..	57,005	855	132	336	272	.....	1,595	1,450	725
37..	55,410	742	130	342	277	.....	1,491	1,464	732
38..	53,919	625	128	347	281	.....	1,381	1,482	741
39..	52,538	557	126	351	280	.....	1,314	1,500	750
40..	51,224	482	124	353	287	.....	1,246	1,520	760
41..	49,978	410	122	355	289	.....	1,205	1,536	768
42..	48,677	365	119	354	289	.....	1,143	1,554	777
43..	47,234	274	117	351	287	.....	1,067	1,570	785

TABLE XXIV—Concluded.

(1) Age.	(2) Active serv- ice.	(3) Withdraw- als.	(4) Dying in line of duty.	(5) Other deaths.	(6) Disability re- tirements.	(7) Service re- tirements.	Total decre- ments. Cols. (3) + (4) + (5) + (6) + (7).	Salary scale from active service Jan. 1, 1916.	Pension scale for males as of age at en- trance for fu- ture entrants.
44..	45,638	214	113	348	283	712	1,670	\$1,586	\$793
45..	43,968	176	109	342	279	796	1,702	1,604	802
46..	42,266	139	104	336	273	917	1,769	1,622	811
47..	40,497	109	99	329	264	968	1,769	1,640	820
48..	38,728	89	94	323	256	1,022	1,784	1,656	828
49..	36,944	66	88	316	248	1,105	1,823	1,670	835
50..	35,121	53	81	308	239	1,187	1,868	1,686	843
51..	33,253	40	75	301	227	1,247	1,890	1,702	851
52..	31,363	25	69	294	217	1,311	1,916	1,714	857
53..	29,447	15	63	286	203	1,358	1,925	1,724	862
54..	27,522		58	275	190	1,423	1,946	1,734	867
55..	25,576		53	266	177	1,445	1,941	1,746	873
56..	23,635		48	259	164	1,489	1,960	1,758	879
57..	21,675		44	271	149	1,480	1,944	1,767	883
58..	19,731		39	284	134	1,462	1,919	1,778	889
59..	17,812		34	271	119	1,425	1,849	1,787	893
60..	15,963		30	287	105	1,370	1,792	1,798	899
61..	14,171		25	278	90	1,299	1,692	1,805	902
62..	12,479		20	271	76	1,228	1,595	1,816	908
63..	10,884		15	259	62	1,134	1,470	1,823	911
64..	9,414		10	248	47	1,034	1,339	1,831	916
65..	8,075		4	237	52	929	1,222	1,841	921
66..	6,853			224	58	832	1,114	1,850	925
67..	5,739			207		734	941	1,860	930
68..	4,798			202		648	850	1,869	934
69..				197		578	775	1,860	930
70..				189		501	690	1,850	925
71..				159		438	597	1,850	925
72..				131		375	506	1,850	925
73..				103		309	412	1,850	925
74..				78		238	316	1,850	925
75..				57		177	234	1,850	925
76..				39		134	173	1,850	925
77..				25		98	123	1,850	925
78..				13		66	79	1,850	925
79..						32	32		
80..						11	11		
81..									
82..									
Totals.		39,116	4,197	15,488	8,679	32,520	100,000		

Tables XXV, XXVI, XXVII and XXVIII, on pp. 109, 110 and 111, respectively, are entirely similar to Tables VIII, IX, X and XI, pp. 88, 89, 90 and 91, respectively, in the Chicago police fund. To these is also added Table XXIX, p. 112, giving the average number of children under 16 years of age of firemen of various ages.

TABLE XXV—(Chicago Firemen).

THE NUMBER AND AVERAGE PENSION OF SERVICE PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age.	Num- ber.	Average pension.	Total pensions.	Age.	Num- ber.	Average pension.	Total pensions.
44.....	3	\$734 67	\$ 2,204	54.....	8	828 25	\$ 6,626
45.....	4	768 50	3,066	55.....	15	727 13	10,907
46.....	4	789 50	3,158	56.....	8	773 50	6,188
47.....	4	719 75	2,879	57.....	5	781 60	3,908
48.....	7	771 86	5,403	58.....	4	692 75	2,771
49.....	3	861 67	2,585	59.....	4	799 25	3,197
50.....	5	759 80	3,798	60.....	12	783 75	9,405
51.....	7	716 00	5,012	61.....	2	842 50	1,685
52.....	7	745 43	5,218	62.....	2	724 50	1,449
53.....	7	785 29	5,497	63.....	4	733 75	2,935

TABLE XXV—Concluded.

Age.	Number.	Average pension.	Total pensions.	Age.	Number.	Average pension.	Total pensions.
64.....	5	\$ 796 60	\$3,983	74.....	2	\$679 50	\$1,359
65.....	4	886 25	3,545	75.....	2	716 00	1,432
66.....	4	785 00	3,140	76.....	1	567 00	567
67.....	3	1,674 67	5,024	77.....	2	717 50	1,435
68.....	2	730 00	1,460	78.....	2	625 00	1,250
69.....	6	669 00	4,014	79.....	1	725 00	725
70.....	1	759 00	759	80.....	1	825 00	825
71.....	3	1,060 67	3,182	99.....	1	725 00	725
72.....	6	846 30	5,078				
73.....	3	783 00	2,349	Totals	164	.....	\$128,743

TABLE XXVI—(Chicago Firemen).

THE NUMBER AND AVERAGE PENSION OF DISABILITY PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age, 1916.	Pensioners disabled in performance of duty.			Pensioners disabled but not in performance of duty.			Totals.		
	Number.	Total pensions.	Average pension.	Number.	Total pensions.	Average pension.	Number.	Total pensions.	Average pension.
32.....	1	\$ 685	\$685 00	.....	.....	.....	1	\$ 685	\$ 685 00
33.....	0	.....	.....	.....	.....	.....	.....	.....	.....
34.....	1	696	696 00	1	\$ 528	\$ 528 00	2	1,224	612 00
35.....	1	550	550 00	1	685	685 00	2	1,235	617 50
36.....	1	685	685 00	.....	.....	.....	1	685	685 00
37.....	2	1,307	653 50	.....	.....	.....	2	1,307	653 50
38.....	6	3,831	638 50	1	624	624 00	7	4,455	635 43
39.....	0	.....	.....	.....	.....	.....	.....	.....	.....
40.....	0	.....	.....	1	567	567 00	1	567	567 00
41.....	1	907	907 00	1	624	624 00	2	1,531	765 50
42.....	2	1,388	694 00	.....	.....	.....	2	1,388	694 00
43.....	3	1,944	648 00	1	624	624 00	4	2,568	642 00
44.....	2	1,247	623 50	1	624	624 00	3	1,871	623 67
45.....	2	1,347	673 50	1	624	624 00	3	1,971	657 00
46.....	4	2,797	699 25	1	567	567 00	5	3,364	672 80
47.....	5	3,975	795 00	1	907	907 00	6	4,882	813 67
48.....	1	685	685 00	.....	.....	.....	1	685	685 00
49.....	2	1,331	665 50	2	1,197	598 50	4	2,528	632 00
50.....	1	624	624 00	2	1,085	542 50	3	1,709	569 67
51.....	0	.....	.....	.....	.....	.....	0	.....	.....
52.....	3	1,550	516 67	.....	.....	.....	3	1,550	516 67
53.....	1	575	575 00	2	1,199	599 50	3	1,774	591 33
54.....	3	1,855	618 33	1	567	567 00	4	2,422	605 50
55.....	4	2,984	746 00	1	567	567 00	5	3,551	710 20
56.....	0	.....	.....	.....	.....	.....	0	.....	.....
57.....	0	.....	.....	1	759	759 00	1	759	759 00
58.....	0	.....	.....	1	624	624 00	1	624	624 00
59.....	2	1,049	524 50	.....	.....	.....	2	1,049	524 50
60.....	0	.....	.....	1	624	624 00	1	624	624 00
61.....	2	1,427	713 50	1	764	764 00	3	2,191	730 33
62.....	1	624	624 00	.....	.....	.....	1	624	624 00
63.....	0	.....	.....	2	1,401	700 50	2	1,401	700 50
64.....	0	.....	.....	.....	.....	.....	0	.....	.....
65.....	0	.....	.....	1	1,375	1,375 00	1	1,375	1,375 00
66.....	0	.....	.....	1	834	834 00	1	834	834 00
67.....	0	.....	.....	.....	.....	.....	0	.....	.....
68.....	1	474	474 00	.....	.....	.....	1	474	474 00
69.....	1	624	624 00	.....	.....	.....	1	624	624 00
70.....	1	567	567 00	.....	.....	.....	1	567	567 00
71.....	0	.....	.....	.....	.....	.....	0	.....	.....
72.....	1	575	575 00	.....	.....	.....	1	575	575 00
73.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
74.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
75.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
76.....	1	525	525 00	.....	.....	.....	1	525	525 00

TABLE XXVI—Concluded.

Age, 1916.	Pensioners disabled in performance of duty.			Pensioners disabled but not in performance of duty.			Totals.		
	Number.	Total pensions.	Average pension.	Number.	Total pensions.	Average pension.	Number.	Total pensions.	Average pension.
77.....									
78.....									
79.....									
80.....									
81.....									
82.....									
83.....	1	\$528	\$528 00				1	\$528	\$528 00
Totals.	57	\$37,356		26	\$17,370		83	\$54,726	

TABLE XXVII—(Chicago Firemen).

THE NUMBER AND PENSIONS OF WIDOW PENSIONERS AS OF JANUARY 1, 1916.

(For classification as to ages, see Table LXXVII, p. 173.)

Class.	Number.	Average pension.	Total pensions.
A*.....	84	\$540	\$45,360
B.....	122	540	65,880
C.....	85	540	45,900
Totals.....	291		\$157,140

* For definitions of A, B and C, see p. 112.

TABLE XXVIII—(Chicago Firemen).

NUMBER AND PENSIONS OF CHILDREN PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age.	Number.	Average pension.	Total pensions.
0-1.....	0		
1-2.....	4	\$ 96 00	\$ 384
2-3.....	1	96 00	96
3-4.....	7	96 00	672
4-5.....	5	96 00	480
5-6.....	13	96 00	1,248
6-7.....	12	96 00	1,152
7-8.....	12	96 00	1,152
8-9.....	12	96 00	1,152
9-10.....	7	96 00	672
10-11.....	10	96 00	960
11-12.....	10	96 00	960
12-13.....	13	96 00	1,248
13-14.....	24	96 00	2,304
14-15.....	22	103 64	2,280
15-16.....	12	96 00	1,152
Totals.....	164		\$15,912

Grand total of all pensions given in Tables XXV, XXVI, XXVII and XXVIII, \$356,521.

TABLE XXIX—(Chicago Firemen).

AVERAGE NUMBER OF CHILDREN UNDER 16 YEARS OF AGE OF FIREMEN OF VARIOUS AGES.

Age of men.	Average number of children.	Age of men.	Average number of children.	Age of men.	Average number of children.	Age of men.	Average number of children.	Age of men.	Average number of children.
24.....	0.16	36	1.78	48	1.52	60	0.31	.....	.....
25.....	0.24	37	1.86	49	1.34	61	0.27	.....	.....
26.....	0.38	38	1.92	50	1.16	62	0.23	.....	.....
27.....	0.53	39	1.96	51	1.00	63	0.19	.....	.....
28.....	0.68	40	1.99	52	0.88	64	0.16	.....	.....
29.....	0.88	41	1.99	53	0.78	65	0.13	.....	.....
30.....	1.07	42	1.97	54	0.68	66	0.11	.....	.....
31.....	1.23	43	1.93	55	0.59	67	0.08	.....	.....
32.....	1.36	44	1.88	56	0.52	68	0.06	.....	.....
33.....	1.48	45	1.82	57	0.46	69	.....	.....	.....
34.....	1.59	46	1.74	58	0.40	70	.....	.....	.....
35.....	1.69	47	1.66	59	0.35	71	.....	.....	.....

CLASSES OF PENSIONERS, PRESENT AND FUTURE.

In making our calculations, the whole group under observation was divided into three classes, according to the classification given in the discussion of the Chicago police fund, p. 91.

WIDOW PENSIONERS.

In the case of the firemen's fund, widow pensioners, both present and future, were divided into three classes as follows:

(A) Widows whose husbands died in performance of duty or from injuries received in performance of duty.

(B) Widows whose husbands were either service pensioners or active members of the department at death after at least 20 years of service.

(C) Remaining widows—these include widows whose husbands died from any cause other than injuries received in performance of duty, with less than 20 years of service, and the small subclass whose husbands, though disabled, did not receive injuries directly in performance of duty.

CHILDREN PENSIONERS.

On January 1, 1916, there were 164 children on the pension roll with pensions amounting to \$15,912 per annum. As in the case of the Chicago police fund, it is certain that under present provisions of the law, the cost for children's pensions will remain relatively insignificant.

DEPENDENT PARENTS.

From the experience under this fund, we find that the cost of this feature is relatively so small that it may be neglected in our predictions of future cost. The data is inadequate to make any reliable prediction, except to say that this feature is of no practical import as far as its cost is concerned.

ALL PENSIONERS ON PENSION ROLL JANUARY 1, 1916, TOGETHER WITH THEIR DEPENDENTS ELIGIBLE FOR PENSION UPON DEATH OF ANY SUCH PENSIONER.

The expected cost by years under this group is given in Table XXX, p. 116.

ALL IN ACTIVE SERVICE JANUARY 1, 1916, TOGETHER WITH THEIR SURVIVING DEPENDENTS ELIGIBLE FOR PENSION.

The expected cost by years under this class is given in Table XXXI, p. 118.

ALL WHO ENTER SERVICE AFTER JANUARY 1, 1916, TOGETHER WITH THEIR SURVIVING DEPENDENTS ELIGIBLE FOR PENSION.

The expected cost by years under this class is given in Table XXXII, p. 120.

TABLE XXXIII.

This table p. 121 contains the total of values in Table XXX, XXXI and XXXII, pp. 116, 118 and 120, and thus includes the total expected costs of pensions by years in this fund. It also gives for each year, until the system carries its normal load, the ratios of pension payments to salaries, the percentages of salaries contributed to pensions by employees and the percentages of salaries that must be contributed from sources other than contributions by employees to maintain pensions under the present plan.

TABLE XXXIV.

This table presents the balance sheet pertaining to this fund. For further reference to it, see p. 115.

COMPARISON OF RATES BETWEEN FIREMEN AND POLICEMEN.

A comparison of rates among firemen (Table XX) with those among policemen (Table IV) shows that rates of withdrawal of firemen by resignation do not differ greatly from those for policemen, the rates for firemen being a little less at the extremes of the table and a little greater at intermediate ages. The rates of mortality in the active service from ordinary causes are, in general, lower than those for policemen, but the rates of death in the performance of duty are much higher than for policemen. In fact, for ages for which our data is most reliable, these rates are from twice to nearly four times as much as for policemen.

The rates of disability retirements are also much higher for firemen than for policemen.

The rates of service retirements below age 53 are higher for firemen than for policemen. For ages above 53 the rates are higher for policemen.

THE PENSIONERS WHO WILL COME FROM FUTURE ENTRANTS INTO THE ACTIVE SERVICE.

During the 10 years considered in this investigation, the average age at entrance to the fire service is 27.15. In making our valuation for future entrants, an entrance age of 27 is assumed.

A service of the size of the present one, under the same conditions of death and withdrawal rates as those found in the period from 1906 to 1916, could be kept up if 94 men of age 27 entered annually. This number of entrants is therefore assumed, and the annual future cost of thus maintaining the service is determined and exhibited in Table XXXII, p. 120.

PRESENT AND FUTURE COSTS.

It may be noted from Table XXXIII, p. 121, that the pension payments in 1916 will amount to about 12.6 per cent of salary payments, and that this will increase gradually for about 40 years, when the system will carry slightly more than the normal load. The pensions will cost 36.6 per cent of salaries when the system is carrying its ultimate normal load.

COMPARATIVE COSTS FOR DISABILITY PENSIONERS AND FOR SERVICE PENSIONERS.

We observe from Table XXXII, p. 120, that when the pension system carries its ultimate normal load, the annual cost of disability pensions is \$70,345, while that of service pensions is \$442,615. Expressed as percentages of the total annual cost of all pensions, including those to widows and children, the disability pensions amount to 6.56 per cent of the total pensions, while the service pensions amount to 41.30 per cent of the total pension payments.

COMPARATIVE COSTS FOR PENSIONS TO MEN AND TO THEIR WIDOWS.

We find from Table XXXII, p. 120, that when the pension system carries its ultimate normal load, the annual cost of pensions to men is \$512,960, while the cost of widows' pensions is \$531,862. Expressed as percentages of all pensions paid, those to men amount to 47.86 per cent of all pension payments, while the pensions to widows amount to 49.62 per cent of all pension payments. The pensions to children will amount to 2.52 per cent of all pensions.

COMPARATIVE COSTS FOR DIFFERENT CLASSES OF WIDOWS.

The classes A, B and C of widows of firemen are defined on p. 112. When the pension system carries its ultimate normal load, the pensions have an annual value of \$112,545 to widows of Class A, \$268,222 to widows of Class B, \$151,095 to widows of Class C. Expressed as percentages of the total cost of all pensions, the pensions to widows of Class A amount to 10.50 per cent, those to widows of Class B to 25.02 per cent, and those to widows of Class C to 14.10 per cent.

PERCENTAGE OF SALARIES REQUIRED FROM FUTURE ENTRANTS TO PROVIDE PENSIONS IF THE PENSIONS WERE TOTALLY CONTRIBUTORY.

To pay pensions in accord with rates given by the 10 years' experience from January 1, 1906, to January 1, 1916, and with all deductions from salaries accumulated at 4 per cent compound interest, and with no returns of contributions in case of withdrawal or death, would require for men entering at age 27 a deduction of 15.87 per cent from salaries.

RESERVES ON THE BASIS OF EXPERIENCE.

If the city should add to the present contributions of 1 per cent from employees about 14.9 per cent of salaries of new entrants, this would produce a proper reserve for a sound pension system for new entrants on the assumption that rates of withdrawal, death and retirement experienced from January 1, 1906, to January 1, 1916, will continue.

VALUATION BALANCE SHEET.

The balance sheet in Table XXXIV exhibits the present values of assets and liabilities for the group of persons who are at present participants in the pension fund. It excludes all reference to future entrants into the service. It may be observed that the total payments of pensions to these participants will amount to \$33,416,548, of which \$494,909 will be contributed by these participants giving 1 per cent of their salaries. Further, \$3,101 constitutes the cash on hand January 1, 1916. This leaves \$32,918,538 to be contributed from sources other than contributions of employees.

A better way to inspect the balance sheet is to give attention to the present value of assets and liabilities. The present value, with a 4 per cent interest rate, of the liabilities for pensions is \$14,103,917. The present value of the contributions of 1 per cent of salaries amounts to \$328,805. The cash on hand is \$3,101. This means that the present value to the city of the liability for carrying out the pension system for present participants under the firemen's fund amounts to \$13,772,011, if the city should assume the responsibility for carrying out this system.

TABLE XXX—(Chicago Firemen).

Pensions accruing to persons on pension roll January 1, 1916.												Pensions accruing to widows and children of pensioners on the roll January 1, 1916.											
Date.	Service pensioners.	Disability pensioners.	Widows of Class A.	Widows of Class B.	Widows of Class C.	Children pensioners.	Totals.	Widows of Class A.	Widows of Class B.	Widows of Class C.	Children.	Totals.											
1916.....	\$25,224	\$51,860	\$44,982	\$64,756	\$45,511	\$15,912	\$348,225	\$ 1,292	\$ 1,788	\$ 506	\$ 701	\$ 4,287											
1917.....	118,316	46,551	44,154	62,437	44,724	13,479	390,661	3,646	5,242	1,522	1,997	12,407											
1918.....	111,630	41,977	43,322	60,121	43,919	11,131	312,100	5,696	8,760	2,887	3,531	29,885											
1919.....	105,154	38,016	42,463	57,793	43,093	9,323	295,842	7,169	11,368	3,048	3,531	25,116											
1920.....	98,843	34,935	41,578	55,451	42,349	8,201	280,857	8,592	13,942	3,689	3,949	30,172											
1921.....	92,693	31,932	40,666	53,115	41,271	7,298	267,005	9,728	16,458	4,199	4,156	34,541											
1922.....	86,756	29,161	39,725	50,785	40,477	6,403	253,307	10,688	18,618	4,640	4,128	38,074											
1923.....	81,020	26,175	38,761	48,441	39,547	5,492	239,436	11,482	20,517	5,022	4,007	41,028											
1924.....	75,480	23,904	37,772	46,098	38,603	4,357	226,214	12,129	22,161	5,336	3,817	43,443											
1925.....	65,039	19,987	35,719	43,783	37,638	3,232	213,383	12,630	23,555	5,599	3,609	45,393											
1926.....	60,184	18,269	34,559	41,505	36,655	2,074	200,979	13,022	24,700	5,802	3,347	46,871											
1927.....	55,502	16,691	33,580	39,233	35,648	1,294	189,267	13,314	25,601	5,957	3,048	47,920											
1928.....	51,086	15,259	32,479	37,003	34,615	361	178,103	13,522	26,279	6,066	2,743	48,610											
1929.....	46,906	13,923	31,362	34,809	33,564	160	167,558	13,638	26,784	6,228	2,425	49,075											
1930.....	42,942	12,682	30,229	32,655	32,469	.....	157,505	13,768	26,936	6,199	2,096	49,061										
1931.....	39,205	11,554	28,497	30,548	31,413	.....	147,814	13,713	27,049	6,163	1,757	48,682										
1932.....	35,686	10,513	27,060	28,497	30,308	.....	138,644	13,575	26,920	6,068	1,443	48,006										
1933.....	32,402	9,546	26,750	26,506	28,067	.....	129,814	13,437	26,613	5,980	1,152	47,182										
1934.....	29,328	8,648	25,576	24,586	26,931	.....	121,351	13,253	26,162	5,853	925	46,203										
1935.....	26,434	7,819	24,398	22,734	26,801	.....	113,217	13,018	25,563	5,728	737	45,046										
1936.....	23,711	7,043	23,218	19,287	25,787	.....	105,485	12,742	24,890	5,562	589	43,713										
1937.....	21,158	6,293	20,041	17,605	23,466	.....	97,884	12,427	23,969	5,366	464	42,226										
1938.....	18,806	5,613	20,870	16,057	22,307	.....	90,563	12,074	23,007	5,163	364	40,608										
1939.....	16,624	5,018	18,708	14,644	21,145	.....	83,653	11,696	21,958	4,945	284	38,883										
1940.....	14,579	4,450	16,559	13,263	19,933	.....	77,139	11,286	20,849	4,723	219	37,077										
1941.....	12,686	3,901	17,498	11,911	18,860	.....	70,843	10,845	19,672	4,490	165	35,172										
1942.....	10,949	3,381	16,320	10,694	18,235	.....	64,796	10,383	18,419	4,244	126	33,172										
1943.....	9,382	2,945	15,228	9,559	16,641	.....	59,579	9,900	17,137	4,004	92	31,133										
1944.....	7,988	2,419	14,160	8,503	15,547	.....	53,755	9,403	15,834	3,749	68	29,054										
1945.....	6,712	2,130	13,132	7,596	14,464	.....	48,689	8,888	14,520	3,500	51	26,959										
1946.....	5,570	1,885	12,135	6,627	13,419	.....	43,964	8,353	13,297	3,250	36	24,866										
1947.....	4,553	1,600	11,170	5,804	12,407	.....	39,636	7,832	11,902	3,011	25	22,770										
1948.....	3,689	1,345	10,244	5,051	11,430	.....	35,534	7,294	10,686	2,771	16	20,747										
1949.....	2,942	1,116	9,363	4,369	10,490	.....	31,759	6,754	9,461	2,535	11	18,761										
1950.....	2,296	917	8,525	3,752	9,736	.....	28,254	6,226	8,310	2,316	6	16,858										
1951.....	1,770	746	7,728	3,197	8,736	.....	25,067	5,707	7,226	2,096	2	15,031										
1952.....	1,341	600	6,974	2,703	7,919	.....	22,177	5,189	6,217	1,889	1	13,296										
1953.....	995	481	6,265	2,203	7,145	.....	19,149	4,707	5,285	1,725	.....	11,717									
1954.....	.....	.....	.....	.....	.....	.....	17,149	4,234	4,443	1,506	.....	10,183				

1955.....	722	382	5,602	1,877	6,421	15,004	3,776	3,691	1,330	.....	8,737
1956.....	510	298	4,980	1,548	5,737	13,082	3,344	3,021	1,147	.....	7,512
1957.....	350	226	4,424	1,268	5,107	11,376	2,942	2,437	1,002	.....	6,381
1958.....	230	172	3,902	1,022	4,520	9,846	2,568	1,938	871	.....	5,377
1959.....	144	133	3,424	812	3,971	8,484	2,222	1,513	743	.....	4,478
1960.....	84	96	2,987	634	3,478	7,981	1,906	1,162	634	.....	3,702
1961.....	44	72	2,592	489	3,030	6,227	1,619	877	540	.....	3,036
1962.....	22	53	2,236	373	2,628	5,312	1,367	466	447	.....	2,463
1963.....	10	38	1,918	279	2,266	4,511	1,148	406	374	.....	1,988
1964.....	4	28	1,635	204	1,936	3,807	939	330	304	.....	1,573
1965.....	1	20	1,383	146	1,613	3,193	763	225	246	.....	1,234
1966.....	.....	14	1,104	100	1,396	2,674	614	148	190	.....	952
1967.....	.....	10	970	65	1,177	2,222	486	93	136	.....	715
1968.....	.....	8	796	40	981	1,825	380	58	130	.....	556
1969.....	.....	7	647	18	812	1,484	294	30	92	.....	416
1970.....	.....	6	590	11	666	1,203	223	16	71	.....	310
1971.....	.....	6	543	5	543	967	165	7	50	.....	222
1972.....	.....	5	324	2	439	770	121	3	37	.....	181
1973.....	.....	4	250	.....	349	603	85	1	25	.....	111
1974.....	.....	3	189	.....	273	465	58	.....	17	.....	75
1975.....	.....	2	140	.....	211	353	39	.....	11	.....	50
1976.....	.....	2	102	.....	159	262	24	.....	6	.....	30
1977.....	.....	1	72	.....	118	191	15	.....	2	.....	17
1978.....	.....	.....	50	.....	84	134	8	.....	1	.....	9
1979.....	.....	.....	33	.....	60	93	4	.....	.....	.....	4
1980.....	.....	.....	21	.....	40	61	3	.....	.....	.....	4
1981.....	.....	.....	13	.....	25	38	1	.....	.....	.....	3
1982.....	.....	.....	8	.....	15	23	.....	.....	.....	.....	.....
1983.....	.....	.....	4	.....	8	12	.....	.....	.....	.....	.....
1984.....	.....	.....	2	.....	5	7	.....	.....	.....	.....	.....
1985.....	.....	.....	1	.....	2	3	.....	.....	.....	.....	.....
1986.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals....	\$1,617,834	\$544,384	\$1,035,788	\$1,053,563	\$1,086,340	\$5,427,268	\$408,366	\$606,661	\$171,243	\$54,984	\$1,333,254
Present values.	\$1,150,363	\$396,177	\$619,226	\$704,972	\$640,654	\$3,587,954	\$301,768	\$358,654	\$86,506	\$38,888	\$685,816
Interest 4 per cent.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Widows of Class A are those whose husbands died in performance of duty or from injuries received in performance of duty.

² Widows of Class B are those whose husbands were either service pensioners or active members of the department at death, after at least 20 years of service.

³ Widows of Class C are those whose husbands died from any cause with less than 20 years of service, and those whose husbands were disabled but not in performance of duty.

TABLE XXXI—(Chicago Firemen).
PENSIONS ACCRUING TO MEMBERS OF ACTIVE FORCE JANUARY 1, 1916, AND TO THEIR WIDOWS AND CHILDREN.

Date.	Service pensioners.	Disability pensioners.	Widows of Class A*.	Widows of Class B*.	Widows of Class C*.	Children pensioners.	Total pensions to active force and dependents.	Salary payments to active service of Jan. 1, 1916.	Amount of 1 per cent contributions.
1916.	\$ 11,123	\$ 3,219	\$ 431	\$ 1,644	\$ 2,064	\$ 1,878	\$ 20,349	\$2,903,662	\$29,037
1917.	23,410	9,580	1,848	5,219	6,123	5,315	61,485	2,810,426	25,104
1918.	53,714	15,162	8,754	8,754	10,182	8,436	101,733	2,716,853	27,169
1919.	78,336	20,125	5,646	14,400	18,248	11,266	144,061	2,622,013	26,220
1920.	100,811	24,469	7,740	20,017	25,017	13,874	185,151	2,527,438	25,274
1921.	123,481	28,384	9,994	26,089	32,062	16,063	226,103	2,432,420	24,324
1922.	145,720	31,926	12,370	32,887	35,740	17,960	266,603	2,337,384	23,374
1923.	167,830	35,227	14,726	40,187	43,276	19,452	306,696	2,243,000	22,430
1924.	189,531	37,922	17,137	48,048	52,576	20,663	345,907	2,149,576	21,496
1925.	210,842	40,202	19,538	55,651	58,666	21,694	383,683	2,054,658	20,547
1926.	231,514	42,398	21,883	64,032	66,554	22,347	420,739	1,961,163	19,612
1927.	251,919	44,262	24,069	73,380	75,581	22,784	457,581	1,867,485	18,675
1928.	271,680	45,792	26,108	83,971	83,971	22,938	493,993	1,773,047	17,730
1929.	290,491	46,933	28,336	93,743	93,743	22,789	527,797	1,679,988	16,800
1930.	308,092	47,925	30,184	103,762	103,762	22,498	559,948	1,586,601	15,866
1931.	324,435	48,660	32,111	113,849	113,849	21,938	590,069	1,493,905	14,939
1932.	340,437	49,161	33,840	123,951	123,951	21,077	618,929	1,402,160	14,022
1933.	353,610	49,215	35,411	134,004	134,004	20,114	643,869	1,310,650	13,107
1934.	366,284	49,082	36,867	143,936	143,936	19,119	667,644	1,220,835	12,208
1935.	377,383	48,777	38,036	153,607	153,607	18,113	688,941	1,133,562	11,336
1936.	386,878	48,333	39,170	163,067	163,067	16,930	707,741	1,047,792	10,478
1937.	394,502	47,483	40,132	172,014	172,014	15,855	723,572	964,541	9,645
1938.	400,173	46,665	40,898	180,507	180,507	14,711	736,584	884,180	8,842
1939.	403,915	45,679	41,530	188,458	188,458	13,606	746,679	806,274	8,063
1940.	405,826	44,393	41,989	195,823	195,823	12,545	753,752	731,386	7,314
1941.	405,764	43,003	42,279	201,419	201,419	11,437	758,631	660,967	6,609
1942.	403,790	41,589	42,401	208,400	208,400	10,417	758,745	592,843	5,928
1943.	399,801	39,922	42,365	213,553	213,553	9,468	756,643	529,234	5,292
1944.	394,116	38,210	42,103	217,810	217,810	8,499	756,317	469,862	4,699
1945.	386,475	36,503	41,883	221,241	221,241	7,629	743,341	413,948	4,139
1946.	377,404	34,587	41,429	223,666	223,666	6,839	732,465	361,926	3,619
1947.	366,686	32,638	40,803	225,043	225,043	6,059	718,607	314,740	3,147
1948.	355,375	30,812	40,093	225,745	225,745	5,337	703,440	270,754	2,708
1949.	341,094	28,762	39,249	225,392	225,392	4,675	683,868	231,342	2,313
1950.	325,245	26,788	38,243	224,013	224,013	4,102	661,624	196,133	1,961
1951.	304,890	24,894	37,272	221,707	221,707	3,535	639,995	164,318	1,643
1952.	294,616	22,819	36,168	217,520	217,520	3,029	614,223	136,334	1,363
1953.	277,529	20,833	34,774	214,476	214,476	2,574	588,554	112,229	1,122
1954.	260,053	18,922	33,521	209,546	209,546	2,177	560,878	88,915	889
1955.	242,341	17,104	32,184	203,848	203,848	1,803	532,152	78,615	786
1956.	224,475	15,402	30,735	197,360	197,360	1,491	502,643	57,322	573
1957.	206,599	13,655	29,243	190,110	190,110	1,219	472,047	44,721	447

1958.....	188,961	12,031	27,704	181,941	29,325	984	440,946	33,855	340
1959.....	171,656	10,520	26,114	173,159	27,473	767	402,689	25,174	252
1960.....	154,749	9,110	24,515	165,448	25,578	595	379,995	18,246	182
1961.....	138,455	7,817	22,892	156,346	23,688	454	349,692	12,874	129
1962.....	122,908	6,641	19,606	146,896	21,786	342	319,850	8,682	87
1963.....	108,144	5,585	16,510	137,334	20,003	253	290,925	5,613	56
1964.....	94,286	4,646	18,067	127,654	18,228	182	263,063	3,491	35
1965.....	81,390	3,823	16,510	117,902	16,495	128	236,248	2,068	21
1966.....	69,508	3,118	14,968	108,202	14,817	88	210,701	1,121	11
1967.....	58,732	2,500	13,473	98,649	13,224	59	186,637	502	5
1968.....	48,937	1,983	12,034	89,318	11,679	35	164,046	165	2
1969.....	40,312	1,550	10,637	80,302	10,231	23	143,055	31	
1970.....	32,676	1,185	9,381	71,640	8,889	13	123,794		
1971.....	26,034	965	8,175	63,381	7,651	7	106,153		
1972.....	20,391	672	7,058	55,585	6,503	2	90,221		
1973.....	15,677	490	6,041	48,332	5,479	1	76,020		
1974.....	11,808	349	4,900	41,621	4,539		63,448		
1975.....	8,705	242	4,278	35,491	3,732		52,448		
1976.....	6,285	164	3,542	29,932	3,125		43,028		
1977.....	4,366	108	2,890	24,950	2,415		34,729		
1978.....	2,915	68	2,330	20,556	1,886		27,755		
1979.....	1,850	43	1,851	16,718	1,453		21,915		
1980.....	1,101	25	1,436	13,405	1,097		17,064		
1981.....	598	24	1,105	10,595	806		13,128		
1982.....	279	14	836	8,243	577		9,949		
1983.....	102	7	615	6,296	402		7,422		
1984.....	27	4	444	4,720	271		5,472		
1985.....	4	1	304	3,477	167		3,954		
1986.....			215	2,491	102		2,809		
1987.....			141	1,745	60		1,946		
1988.....			88	1,185	32		1,305		
1989.....			51	768	15		834		
1990.....			27	480	6		513		
1991.....			13	282	2		297		
1992.....			5	152	1		158		
1993.....			2	73			75		
1994.....			1	26			27		
1995.....				9			9		
1996.....				3			3		
1997.....				1			1		
Totals.....	\$13,207,176	\$1,511,127	\$1,532,014	\$7,927,213	\$1,960,218	\$518,278	\$26,656,026	\$49,491,045	\$49,909
Present values.....	\$5,203,970	\$705,162	\$545,510	\$2,390,394	\$689,762	\$286,349	\$9,830,147	\$32,880,500	\$328,805
Interest 4 per cent.....									

* For definitions of classes see p. 112.

TABLE XXXII—(Chicago Firemen).

TABLE SHOWING THE ANNUAL AMOUNTS OF PENSION AND SALARY PAYMENTS TO BE MADE TO 94 PERSONS ENTERING EACH YEAR INTO THE SERVICE OF THE CHICAGO FIRE DEPARTMENT AT AN AVERAGE AGE OF 27 YEARS TO MAINTAIN A PERMANENT STAFF OF PRESENT SIZE—AND TO THEIR WIDOWS AND CHILDREN.

Year.	Service pensioners.	Disability pensioners.	Widows of Class A*.	Widows of Class B*.	Widows of Class C*.	Children pensioners.	Total pension payments on account of future entrants.	Total salary payments on account of future entrants.
1916.		\$ 0	\$ 0		\$ 0	\$ 0	\$ 0	\$ 59,282
1917.		39	30		60	15	144	173,238
1918.		147	127		249	62	585	292,014
1919.		316	303		583	151	1,353	404,857
1920.		546	567		1,073	292	2,478	515,063
1921.		849	914		1,727	492	3,982	632,491
1922.		1,233	1,377		2,554	758	5,922	727,204
1923.		1,701	1,949		3,563	1,094	8,307	829,608
1924.		2,255	2,634		4,763	1,501	11,153	929,939
1925.		2,898	3,437		6,162	1,982	14,479	1,028,402
1926.		3,631	4,359		7,767	2,537	18,294	1,125,098
1927.		4,460	5,404		9,584	3,165	22,610	1,220,223
1928.		5,381	6,564		11,617	3,864	27,426	1,314,036
1929.		6,398	7,847		13,867	4,629	32,741	1,406,664
1930.		7,513	9,250		16,340	5,455	38,558	1,498,062
1931.		8,732	10,770		19,033	6,336	44,871	1,588,029
1932.		10,056	12,405		21,930	7,264	51,655	1,676,283
1933.		11,483	14,155		25,005	8,232	58,875	1,762,462
1934.		13,011	16,017		28,241	9,231	66,500	1,846,400
1935.		14,633	17,989		31,620	10,258	74,500	1,927,961
1936.	\$ 0	16,349	20,065	\$ 0	35,121	11,306	82,842	2,007,050
1937.	3,417	18,144	22,246	597	38,726	12,368	95,498	2,083,447
1938.	7,664	20,011	24,524	1,400	42,415	13,435	109,449	2,156,976
1939.	12,780	21,940	26,895	2,440	46,170	14,494	124,719	2,227,502
1940.	18,819	23,925	29,353	3,748	49,972	15,532	141,349	2,294,924
1941.	25,822	25,957	31,890	5,353	53,805	16,537	159,364	2,359,039
1942.	33,818	28,024	34,500	7,279	57,657	17,499	178,777	2,419,632
1943.	42,824	30,122	37,175	9,550	61,517	18,414	199,602	2,476,587
1944.	52,854	32,241	39,906	12,187	65,376	19,278	221,842	2,529,863
1945.	63,910	34,367	42,685	15,205	69,226	20,088	245,481	2,579,422
1946.	75,981	36,494	45,503	18,621	73,058	20,843	270,500	2,625,213
1947.	89,038	38,614	48,351	22,456	76,865	21,544	296,868	2,667,041
1948.	103,015	40,717	51,223	26,734	80,639	22,193	324,521	2,705,085
1949.	117,830	42,794	54,110	31,468	84,373	22,790	353,365	2,739,367
1950.	133,383	44,837	56,102	36,668	88,059	23,338	382,387	2,769,982
1951.	149,560	46,844	59,888	42,339	91,689	23,849	411,169	2,797,078
1952.	166,236	48,800	62,758	48,478	95,254	24,305	445,831	2,820,852
1953.	183,279	50,708	65,601	55,092	98,747	24,716	478,143	2,841,512
1954.	200,541	52,563	68,404	62,161	102,161	25,085	510,915	2,859,322
1955.	217,875	54,371	71,159	69,652	105,490	25,414	543,961	2,874,520
1956.	235,142	56,138	73,858	77,533	108,728	25,706	577,105	2,887,353
1957.	252,206	57,805	76,496	85,765	111,869	25,963	610,104	2,898,105
1958.	268,949	59,372	79,067	94,328	114,909	26,185	642,810	2,907,962
1959.	285,268	60,832	81,568	103,177	117,842	26,376	675,063	2,914,058
1960.	301,071	62,177	83,994	112,261	120,664	26,531	706,698	2,919,608
1961.	316,269	63,401	86,342	121,519	123,370	26,657	737,558	2,923,824
1962.	330,793	64,502	88,612	130,883	125,954	26,758	767,502	2,926,922
1963.	344,577	65,482	90,798	140,314	128,410	26,837	796,418	2,929,199
1964.	357,548	66,345	92,894	149,744	130,743	26,899	824,173	2,930,608
1965.	369,637	67,095	94,893	159,111	132,949	26,946	850,631	2,931,567
1966.	380,788	67,740	96,790	168,350	135,024	26,981	875,673	2,932,136
1967.	390,955	68,289	98,578	177,405	136,963	27,007	899,197	2,932,436
1968.	400,094	68,748	100,253	186,224	138,763	27,025	921,107	2,932,551
1969.	408,182	69,127	101,811	194,754	140,422	27,037	941,333	2,932,586
1970.	415,227	69,434	103,250	202,935	141,940	27,044	959,830	2,932,592
1971.	421,253	69,678	104,568	210,714	143,317	27,049	976,579	2,932,592
1972.	426,324	70,013	105,765	218,040	144,555	27,051	991,748	2,932,592
1973.	430,511	70,120	106,842	224,871	145,658	27,052	1,005,054	2,932,592
1974.	433,896	70,197	107,802	231,172	146,630	27,052	1,016,749	2,932,592
1975.	436,565	70,251	108,648	236,922	147,476	27,052	1,026,914	2,932,592
1976.	438,605	70,287	109,385	242,100	148,204	27,052	1,035,633	2,932,592
1977.	440,103	70,311	110,020	246,702	148,823	27,052	1,043,011	2,932,592
1978.	441,147	70,326	110,559	250,739	149,341	27,052	1,049,164	2,932,592
1979.	441,829	70,336	111,010	254,231	149,768	27,052	1,054,226	2,932,592
1980.	442,241	70,341	111,382	257,207	150,114	27,052	1,058,337	2,932,592
1981.	442,465	70,344	111,683	259,705	150,389	27,052	1,061,638	2,932,592
1982.	442,570	70,345	111,922	261,766	150,603	27,052	1,064,258	2,932,592
1983.	442,608	70,345	112,108	263,438	150,765	27,052	1,066,316	2,932,592
1984.	442,614	70,345	112,249	264,768	150,884	27,052	1,067,912	2,932,592

* For definitions of classes see p. 112.

TABLE XXXII—Concluded.

Year.	Service pensioners.	Disability pensioners.	Widows of Class A.	Widows of Class B.	Widows of Class C.	Children pensioners.	Total pension payments on account of future entrants.	Total salary payments on account of future entrants.
1985.....	\$442,615	\$70,345	\$112,353	\$265,801	\$150,968	\$27,052	\$1,069,134	\$2,932,592
1986.....	442,615	70,345	112,426	266,585	151,022	27,052	1,070,045	2,932,592
1987.....	442,615	70,345	112,476	267,160	151,056	27,052	1,070,704	2,932,592
1988.....	442,615	70,345	112,508	267,567	151,076	27,052	1,071,163	2,932,592
1989.....	442,615	70,345	112,527	267,843	151,087	27,052	1,071,469	2,932,592
1990.....	442,615	70,345	112,537	268,019	151,092	27,052	1,071,660	2,932,592
1991.....	442,615	70,345	112,542	268,123	151,094	27,052	1,071,771	2,932,592
1992.....	442,615	70,345	112,544	268,180	151,095	27,052	1,071,831	2,932,592
1993.....	442,615	70,345	112,545	268,208	151,095	27,052	1,071,860	2,932,592
1994.....	442,615	70,345	112,545	268,217	151,095	27,052	1,071,869	2,932,592
1995.....	442,615	70,345	112,545	268,221	151,095	27,052	1,071,873	2,932,592
1996.....	442,615	70,345	112,545	268,222	151,095	27,052	1,071,874	2,932,592
1997.....	442,615	70,345	113,545	268,222	151,095	27,052	1,071,874	2,932,592
Totals.	\$18,632,078	\$3,667,315	\$5,354,219	\$9,478,474	\$7,571,100	\$1,590,698	\$46,293,884	\$194,793,246

TABLE XXXIII—(Chicago Firemen).

SHOWING THE COMBINED ANNUAL PENSION PAYMENTS TO ALL CLASSES, AND THE PERCENTAGES THESE PAYMENTS ARE OF TOTAL SALARIES. THIS TABLE IS FORMED BY COMBINING RESULTS IN TABLES XXX, XXXI AND XXXII, AND INCLUDES ALL PAYMENTS TO PRESENT PENSIONERS, PRESENT ACTIVE SERVICE, FUTURE ENTRANTS, AND TO THEIR WIDOWS AND CHILDREN.

Year.	Pensions to present pensioners and to their widows and children.	Pensions to present active service and to their widows and children.	Pensions to new entrants and to their widows and children.	Grand totals of all pensions.	Salary payments.	Ratios of pensions to salaries in percentages.	Percentages contributed by employees.	Percentages to be contributed by the city and unprovided for.
1916....	\$352,512	\$ 20,349	\$ 0	\$ 372,861	\$2,962,944	12.6	1.0	11.6
1917....	342,068	61,495	144	403,707	2,983,664	13.5	1.0	12.5
1918....	331,838	101,733	585	434,156	3,008,867	14.4	1.0	13.4
1919....	320,958	144,081	1,353	466,392	3,026,870	15.4	1.0	14.4
1920....	311,029	185,151	2,478	498,658	3,042,501	16.4	1.0	15.4
1921....	301,546	226,103	3,982	531,631	3,054,911	17.4	1.0	16.4
1922....	291,381	266,603	5,922	563,906	3,064,588	18.4	1.0	17.4
1923....	280,464	306,696	8,307	595,467	3,072,608	19.4	1.0	18.4
1924....	269,657	345,907	11,153	626,717	3,079,515	20.4	1.0	19.4
1925....	258,786	383,683	14,479	656,948	3,083,060	21.4	1.0	20.4
1926....	247,850	420,739	18,294	686,883	3,086,261	22.3	1.0	21.3
1927....	237,187	457,581	22,610	717,378	3,087,713	23.3	1.0	22.3
1928....	226,713	493,993	27,426	748,132	3,087,083	24.2	1.0	23.2
1929....	216,633	527,797	32,741	777,171	3,086,652	25.2	1.0	24.2
1930....	206,566	559,948	38,558	805,072	3,084,663	26.1	1.0	25.1
1931....	196,496	590,089	44,871	831,456	3,081,934	27.0	1.0	26.0
1932....	186,650	618,929	51,655	857,234	3,078,443	27.8	1.0	26.8
1933....	176,996	643,869	58,875	879,740	3,073,112	28.6	1.0	27.6
1934....	167,554	667,644	66,500	901,698	3,067,235	29.4	1.0	28.4
1935....	158,263	688,941	74,500	921,704	3,061,543	30.1	1.0	29.1
1936....	149,148	707,741	82,842	939,731	3,054,842	30.8	1.0	29.8
1937....	140,110	723,572	95,498	959,180	3,047,988	31.5	1.0	30.5
1938....	131,171	736,584	109,449	977,204	3,041,156	32.1	1.0	31.1
1939....	122,536	746,679	124,719	993,934	3,033,776	33.0	1.0	32.0
1940....	114,216	753,752	141,349	1,009,317	3,026,310	33.4	1.0	32.4
1941....	106,015	756,631	159,364	1,022,010	3,019,906	33.9	1.0	32.9
1942....	97,968	758,745	178,777	1,065,490	3,012,475	34.4	1.0	33.4
1943....	90,712	756,643	199,602	1,046,957	3,005,811	34.8	1.0	33.8
1944....	82,809	751,317	221,842	1,055,968	2,999,725	35.2	1.0	34.2
1945....	75,648	743,341	245,841	1,064,470	2,993,370	35.6	1.0	34.6
1946....	68,830	732,465	270,500	1,071,795	2,987,139	35.9	1.0	34.9
1947....	62,406	718,607	296,868	1,077,881	2,981,781	36.1	1.0	35.1
1948....	56,281	703,440	324,521	1,084,242	2,975,839	36.4	1.0	35.4
1949....	50,520	683,868	353,365	1,087,753	2,970,709	36.6	1.0	35.6

TABLE XXXIII—Concluded.

Year.	Pensions to present pensioners and to their widows and children.	Pensions to present active service and to their widows and children.	Pensions to new entrants and to their widows and children.	Grand totals of all pensions.	Salary payments.	Ratios of pensions to salaries in percentages.	Percentages contributed by employees.	Percentages to be contributed by the city and unprovided for
1950....	\$45,142	\$661,624	\$ 382,387	\$1,089,153	\$2,966,115	36.7	1.0	35.7
1951....	40,118	639,995	414,169	1,094,282	2,961,396	37.0	1.0	36.0
1952....	35,473	614,223	445,831	1,095,527	2,957,186	37.1	1.0	36.1
1953....	31,254	588,554	478,143	1,097,951	2,953,741	37.2	1.0	36.2
1954....	27,332	560,878	510,915	1,099,125	2,948,237	37.3	1.0	36.3
1955....	23,801	532,152	543,961	1,099,914	2,947,165	37.3	1.0	36.3
1956....	20,594	502,543	577,105	1,100,242	2,944,675	37.4	1.0	36.4
1957....	17,757	472,047	610,104	1,099,908	2,942,827	37.4	1.0	36.4
1958....	15,223	440,946	642,810	1,098,979	2,941,917	37.4	1.0	36.4
1959....	12,962	409,689	675,063	1,097,714	2,939,232	37.4	1.0	36.4
1960....	10,983	379,995	706,698	1,097,676	2,937,854	37.4	1.0	36.4
1961....	9,263	349,662	737,558	1,096,483	2,936,698	37.3	1.0	36.3
1962....	7,775	319,850	767,502	1,095,127	2,935,604	37.3	1.0	36.3
1963....	6,499	290,925	796,418	1,093,842	2,934,732	37.3	1.0	36.3
1964....	5,380	263,063	824,173	1,092,616	2,933,496	37.2	1.0	36.2
1965....	4,427	236,248	850,631	1,091,306	2,933,630	37.2	1.0	36.2
1966....	3,626	210,701	875,673	1,090,000	2,933,257	37.2	1.0	36.2
1967....	2,937	186,637	899,197	1,088,771	2,932,938	37.1	1.0	36.1
1968....	2,381	164,046	921,107	1,087,534	2,932,716	37.1	1.0	36.1
1969....	1,900	143,055	941,333	1,086,288	2,932,617	37.0	1.0	36.0
1970....	1,513	123,794	959,830	1,085,137	2,932,592	37.0	1.0	36.0
1971....	1,189	106,153	976,579	1,083,921	2,932,592	37.0	1.0	36.0
1972....	931	90,221	991,748	1,082,900	2,932,592	36.9	1.0	35.9
1973....	714	76,020	1,005,054	1,081,788	2,932,592	36.9	1.0	35.9
1974....	540	63,448	1,016,749	1,080,737	2,932,592	36.9	1.0	35.9
1975....	403	52,448	1,026,914	1,079,765	2,932,592	36.8	1.0	35.8
1976....	292	43,028	1,035,633	1,078,953	2,932,592	36.8	1.0	35.8
1977....	208	34,729	1,043,011	1,077,948	2,932,592	36.8	1.0	35.8
1978....	143	27,755	1,049,164	1,077,062	2,932,592	36.7	1.0	35.7
1979....	97	21,915	1,054,226	1,076,238	2,932,592	36.7	1.0	35.7
1980....	64	17,064	1,058,337	1,075,465	2,932,592	36.7	1.0	35.7
1981....	39	13,128	1,061,638	1,074,805	2,932,592	36.7	1.0	35.7
1982....	23	9,949	1,064,258	1,074,230	2,932,592	36.6	1.0	35.6
1983....	12	7,422	1,066,316	1,073,750	2,932,592	36.6	1.0	35.6
1984....	7	5,472	1,067,912	1,073,391	2,932,592	36.6	1.0	35.6
1985....	3	3,954	1,069,134	1,073,091	2,932,592	36.6	1.0	35.6
1986....	.....	2,809	1,070,045	1,072,854	2,932,592	36.6	1.0	35.6
1987....	.....	1,946	1,070,704	1,072,650	2,932,592	36.6	1.0	35.6
1988....	.....	1,305	1,071,163	1,072,468	2,932,592	36.6	1.0	35.6
1989....	.....	834	1,071,469	1,072,303	2,932,592	36.6	1.0	35.6
1990....	.....	513	1,071,660	1,072,173	2,932,592	36.6	1.0	35.6
1991....	.....	297	1,071,771	1,072,068	2,932,592	36.6	1.0	35.6
1992....	.....	158	1,071,831	1,071,989	2,932,592	36.6	1.0	35.6
1993....	.....	75	1,071,860	1,071,935	2,932,592	36.6	1.0	35.6
1994....	.....	27	1,071,869	1,071,896	2,932,592	36.6	1.0	35.6
1995....	.....	9	1,071,873	1,071,882	2,932,592	36.6	1.0	35.6
1996....	.....	3	1,071,874	1,071,877	2,932,592	36.6	1.0	35.6
1997....	.....	1	1,071,874	1,071,875	2,932,592	36.6	1.0	35.6
Totals.	\$6,760,522	\$26,656,026	\$46,293,884	\$79,710,432	\$244,283,603	.....	.....	.....

BALANCE SHEET SHOWING STATUS OF FUND AS OF JANUARY 1, 1916.

Liabilities.		Assets.				
	Total amounts of payments to be made.	Present value of payments. Interest 4 per cent.	Difference due to interest.	Total payments to be received on hand.	Present value of payments to be received or on hand. Interest 4 per cent.	Difference due to interest.
Pensions to 164 pensioners on service pension roll.....	\$1,617,834	\$1,150,363	\$467,471			
Pensions to 83 pensioners on disability pension roll.....	544,384	396,177	148,207			
Pensions to 84 widows of Class A on pension roll.....	1,035,788	619,296	416,562			
Pensions to 122 widows of Class B on pension roll.....	1,033,563	704,972	348,591			
Pensions to 85 widows of Class C on pension roll.....	1,086,340	640,634	445,686			
Pensions to 164 children on pension roll.....	89,359	76,562	12,797			
Total pensions entered upon.....	\$5,427,268	\$3,587,954	\$1,839,314			
Pensions to present members of active force retiring on service pensions.....	\$13,207,176	\$5,203,970	\$8,003,206			
Pensions to present members of active force retiring on disability pensions.....	1,511,127	705,162	805,965			
Pensions to widows of Class A whose husbands are at present on pension roll.....	408,366	201,788	206,598			
Pensions to widows of Class B whose husbands are at present on pension roll.....	698,661	358,654	340,007			
Pensions to widows of Class C whose husbands are at present on pension roll.....	171,243	86,506	84,737			
Pensions to widows of Class A from husbands at present on active force.....	1,532,014	545,510	986,504			
Pensions to widows of Class B from husbands at present on active force.....	7,927,213	2,399,394	5,527,819			
Pensions to widows of Class C from husbands at present on active force.....	1,940,218	689,762	1,270,456			
Pensions to children of present pensioners.....	54,984	38,888	16,096			
Pensions to children of present active service.....	518,278	286,349	231,929			
Total pensions not entered upon.....	\$27,989,280	\$10,515,963	\$17,473,317			
Grand totals.....	\$33,416,548	\$14,103,917	\$19,312,631			
				Grand totals.	\$33,416,548	\$19,312,631

For definitions of classes see p. 112

For definitions of classes see p. 112.

THE TEACHERS' FUND OF CHICAGO.

THE BENEFITS.

Service pensions: Pensions of \$400 are granted to all who choose to retire after 25 years of service, the last 15 being in Chicago.

Disability pensions: Pensions are granted to those retired on account of disability after 15 years of service, the last 9 being in Chicago. The amount of the disability pension is such that its ratio to \$400 equals the ratio of the contributions of the individual to \$450.

Teachers retired under previous acts have their pensions graduated so as to receive not less than \$320 nor more than the maximum benefit herein named.

DATA ON MALES AND FEMALES KEPT SEPARATE.

In this service both sexes are largely represented, and as the average age of entering this service was very much lower for females than for males it seemed advisable to treat them separately in this investigation. The results show a decided difference in costs per individual for men and women. This difference is doubtless due in part to the facts that the male teachers receive on the average higher salaries than the female teachers and that the higher the salary the less is a person inclined to accept a pension at an early age.

Table XXXV below, gives a summary of the results of the tabulation of the data on female teachers, and Table XXXVI, p. 125, on the male teachers.

TABLE XXXV.—(Female Teachers).

ACTUAL EXPERIENCE WITH THOSE WHO HAVE BEEN IN ACTIVE SERVICE WITHIN THE PERIOD OF JANUARY 1, 1906, AND JANUARY 1, 1916.

(1) Age.	(2) Survivors of Jan. 1, 1906, on active list Jan. 1, 1916, with ages as of Jan. 1, 1906.	(3) Survivors of Jan. 1, 1906, not on active list Jan. 1, 1916, with ages as of Jan. 1, 1906.	(4) Entrants still in active service, with ages at entrance.	(5) Entrants withdrawn from active list before Jan. 1, 1916, with ages at entrance.	(6) Withdrawals by resignation or dismissal, with ages at withdrawal.	(7) Deaths, with ages at death.	(8) Disability retirements, with ages at retirement.	(9) Service retirements, with ages at retirement.	(10) Total decrements. Cols. (6)+(7)+(8)+(9).	(11) Existing Jan. 1, 1916 on active list with ages as of Jan. 1, 1916.
17.....	2	6	1	1	.....	.....	.....	.....	.....	.....
18.....	5	13	1	1	.....	.....	.....	.....	.....	.....
19.....	7	110	11	62	.....	.....	.....	.....	.....	.....
20.....	16	420	62	2	.....	.....	.....	.....	2	20
21.....	38	560	122	12	.....	.....	.....	.....	12	61
22.....	65	400	94	38	.....	.....	.....	.....	38	144
23.....	100	198	55	48	.....	.....	.....	.....	48	223
etc.....			Detail	for	each	age.				
Totals.....	3,712	1,681	3,298	841	1,990	163	53	316	2,522	7,010

TABLE XXXVI.—(Male Teachers).

ACTUAL EXPERIENCE WITH THOSE WHO HAVE BEEN IN ACTIVE SERVICE WITHIN THE PERIOD OF JANUARY 1, 1906, AND JANUARY 1, 1916.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Age.	Survivors of Jan. 1, 1906, on active list Jan. 1, 1916, with ages as of Jan. 1, 1906.	Survivors of Jan. 1, 1906, not on active list Jan. 1, 1916, with ages as of Jan. 1, 1906.	Entrants still in active service, with ages at entrance.	Entrants withdrawn from active list before Jan. 1, 1916, with ages at entrance.	Withdrawals by resignation or dismissal, with ages at withdrawal.	Deaths, with ages at death.	Disability retirements, with ages at retirement.	Service retirements, with ages at retirement.	Total decrements. Cols. (6)+(7)+(8)+(9).	Existing Jan. 1, 1916 on active list with ages as of Jan. 1, 1916.
19.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....
20.....	.....	.....	13	3	.....	.....	.....	.....	.....	.....
21.....	.....	.....	18	3	.....	.....	.....	.....	.....	1
22.....	.....	.....	11	3	4	.....	.....	.....	4	6
23.....	.....	.....	28	2	1	.....	.....	.....	1	7
24.....	5	2	16	1	0	.....	.....	.....	0	14
25.....	.....	1	13	2	5	1	.....	.....	6	11
Etc.	.....	.....	.....	Detail	for	each	age.	.....	.....	.....
Totals	368	110	376	53	113	27	3	20	163	744

DETERMINATION OF RATES OF CHANGES ON WHICH COST OF PENSIONS DEPENDS.

In Table XXXVII below, are shown graduated rates and probabilities for female teachers, and in Table XXXVIII, p. 126, for male teachers. It may be stated here that the rates of disability retirements among the female teachers are sufficiently high to warrant our making use of them, but that in the case of the male teachers they are too low to give a criterion on which to base any calculations. We accordingly classed male disability pensioners with male service pensioners.

TABLE XXXVII.—(Female Teachers).

Age.	Rates of withdrawal by resignation and dismissal.	Rates of mortality in active service.	Rates of disability retirement.	Rates of service retirement.	Rates of mortality among disability pensioners.	Rates of mortality among service pensioners.
20.....	0.0035	0.00060	.....	.....	.....	.....
21.....	0.0100	0.00070	.....	.....	.....	.....
22.....	0.0213	0.00078	.....	.....	.....	.....
23.....	0.0310	0.00085	.....	.....	.....	.....
24.....	0.0460	0.00092	.....	.....	.....	.....
25.....	0.0551	0.00100	.....	.....	.....	.....
26.....	0.0585	0.00109	.....	.....	.....	.....
27.....	0.0608	0.00116	.....	.....	.....	.....
28.....	0.0615	0.00123	.....	.....	.....	.....
29.....	0.0611	0.00131	.....	.....	.....	.....
30.....	0.0594	0.00140	.....	.....	.....	.....
31.....	0.0545	0.00148	.....	.....	.....	.....
32.....	0.0490	0.00157	.....	.....	.....	.....
33.....	0.0448	0.00165	.....	.....	.....	.....
34.....	0.0415	0.00173	.....	.....	.....	.....
35.....	0.0387	0.00182	0.00020	.....	.....	.....
36.....	0.0359	0.00190	0.00055	.....	.....	.....
37.....	0.0330	0.00200	0.00085	.....	.....	.....
38.....	0.0301	0.00213	0.00110	.....	0.0241	.....
39.....	0.0272	0.00227	0.00131	.....	0.0244	.....
40.....	0.0245	0.00245	0.00153	.....	0.0247	.....
41.....	0.0216	0.00265	0.00174	.....	0.0250	.....
42.....	0.0191	0.00288	0.00192	0.0042	0.0253	0.01165

TABLE XXXVII—Concluded.

Age.	Rates of withdrawal by resignation and dismissal.	Rates of mortality in active service.	Rates of disability retirement.	Rates of service retirement.	Rates of mortality among disability pensioners.	Rates of mortality among service pensioners.
43.....	0.0174	0.00313	0.00208	0.0057	0.0257	0.01195
44.....	0.0159	0.00340	0.00219	0.0066	0.0260	0.01225
45.....	0.0146	0.00370	0.00232	0.0082	0.0264	0.01265
46.....	0.0135	0.00399	0.00240	0.0096	0.0268	0.01324
47.....	0.0125	0.00432	0.00247	0.0110	0.0272	0.01374
48.....	0.0115	0.00467	0.00248	0.0127	0.0278	0.01427
49.....	0.0109	0.00501	0.00240	0.0144	0.0283	0.01481
50.....	0.0101	0.00547	0.00212	0.0164	0.0290	0.01533
51.....	0.0095	0.00592	0.00199	0.0185	0.0296	0.01585
52.....	0.0089	0.00642	0.00198	0.0210	0.0302	0.01642
53.....	0.0083	0.00695	0.00208	0.0240	0.0311	0.01694
54.....	0.0079	0.00755	0.00237	0.0270	0.0320	0.01753
55.....	0.0075	0.00820	0.00283	0.0305	0.0329	0.01812
56.....	0.0071	0.00891	0.00312	0.0339	0.0340	0.01873
57.....	0.0068	0.00961	0.00318	0.0375	0.0350	0.01938
58.....	0.0065	0.01036	0.00312	0.0415	0.0363	0.02010
59.....	0.0062	0.01116	0.00292	0.0462	0.0377	0.02092
60.....	0.0058	0.01200	0.00258	0.0512	0.0392	0.02179
61.....	0.0055	0.01315	0.00212	0.0564	0.0409	0.02288
62.....	0.0052	0.01462	0.00145	0.0618	0.0427	0.02404
63.....	0.0049	0.01640	0.00105	0.0671	0.0448	0.02546
64.....	0.0046	0.0181	0.00068	0.0732	0.0467	0.02710
65.....	0.0043	0.0199	0.00038	0.0806	0.0488	0.02900
66.....	0.0040	0.0218	0.00010	0.0890	0.0513	0.03121
67.....	0.0036	0.0238	.....	0.0992	0.0539	0.03370
68.....	0.0031	0.0261	.....	0.1130	0.0569	0.03664
69.....	0.0025	0.0285	.....	0.1310	0.0600	0.03991
70.....	0.0017	0.0311	.....	0.154	0.0633	0.04358
71.....	0.0008	0.0339	.....	0.185	0.0671	0.04773
72.....	.....	0.0369	.....	0.209	0.0714	0.05226
73.....	.....	0.0403	.....	0.235	0.0759	0.05731
74.....	.....	0.0439	.....	0.258	0.0810	0.06285
75.....	.....	0.0478	.....	0.283	0.0866	0.06889
76.....	.....	0.0520	.....	0.323	0.0930	0.07551
77.....	.....	0.0575	.....	0.382	0.1000	0.08260
78.....	.....	0.0652	.....	0.473	0.1080	0.09019
79.....	.....	0.0760	.....	0.600	0.1165	0.09882
80.....	.....	.....	.....	0.852	0.1260	0.10793
81.....	.....	.....	.....	1.000	0.1370	0.11771
82.....	.....	.....	.....	.....	0.1483	0.12835
83.....	.....	.....	.....	.....	0.1605	0.13970
84.....	.....	.....	.....	.....	0.1725	0.15207
85.....	.....	.....	.....	.....	0.1851	0.16524
86.....	.....	.....	.....	.....	0.1990	0.17946
87.....	.....	.....	.....	.....	0.2140	0.19466
88.....	.....	.....	.....	.....	0.2290	0.21096
89.....	.....	.....	.....	.....	0.2450	0.22835
90.....	.....	.....	.....	.....	0.2630	0.24690
91.....	.....	.....	.....	.....	0.2825	0.26664
92.....	.....	.....	.....	.....	0.3030	0.28759
93.....	.....	.....	.....	.....	0.3240	0.30979
94.....	.....	.....	.....	.....	0.3465	0.33321
95.....	.....	.....	.....	.....	0.3710	0.35787
96.....	.....	.....	.....	.....	0.3970	0.38375
97.....	.....	.....	.....	.....	0.4250	0.41082
98.....	.....	.....	.....	.....	0.4550	0.43879
99.....	.....	.....	.....	.....	0.4880	0.46820
100.....	.....	.....	.....	.....	0.5240	0.49836

TABLE XXXVIII.—(Male Teachers).

Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in active service.	Rates of service retirement.	Rates of mortality among pensioners.
19.....	0.0315	0.00112	.....
20.....	0.0328	0.00128	.....
21.....	0.0340	0.00144	.....
22.....	0.0349	0.00165	.....
23.....	0.0352	0.00182	.....

TABLE XXXVIII—Concluded.

Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in active service.	Rates of service retirement.	Rates of mortality among pensioners.
24.....	0.0363	0.00198	.....	.....
25.....	0.0366	0.00221	.....	.....
26.....	0.0368	0.00238	.....	.....
27.....	0.0372	0.00263	.....	.....
28.....	0.0372	0.00297	.....	.....
29.....	0.0370	0.00350	.....	.....
30.....	0.0363	0.00432	.....	.....
31.....	0.0359	0.00540	.....	.....
32.....	0.0355	0.00611	.....	.....
33.....	0.0340	0.00629	.....	.....
34.....	0.0325	0.00608	.....	.....
35.....	0.0305	0.00585	.....	.....
36.....	0.0285	0.00560	.....	.....
37.....	0.0255	0.00533	.....	.....
38.....	0.0232	0.00483	.....	.....
39.....	0.0214	0.00409	.....	.....
40.....	0.0198	0.00330	.....	.....
41.....	0.0182	0.00317	.....	.....
42.....	0.0168	0.00282	.....	.....
43.....	0.0157	0.00275	.....	.....
44.....	0.0146	0.00265	.....	.....
45.....	0.0135	0.00257	.....	.....
46.....	0.0125	0.00275	.....	.....
47.....	0.0117	0.00325	.....	.....
48.....	0.0108	0.00350	0.0025	0.0389
49.....	0.0100	0.00380	0.0045	0.0391
50.....	0.0090	0.00451	0.0056	0.0393
51.....	0.0080	0.00490	0.0062	0.0395
52.....	0.0071	0.00528	0.0070	0.0397
53.....	0.0062	0.00572	0.0080	0.0399
54.....	0.0053	0.00622	0.0090	0.0402
55.....	0.0044	0.00695	0.0105	0.0407
56.....	0.0035	0.00798	0.0113	0.0411
57.....	0.0025	0.00876	0.0126	0.0418
58.....	0.0016	0.00960	0.0141	0.0426
59.....	0.0008	0.01044	0.0156	0.0436
60.....	0.0004	0.01134	0.0172	0.0448
61.....	0.0001	0.01343	0.0189	0.0460
62.....	.....	0.01554	0.0205	0.0476
63.....	.....	0.01800	0.0220	0.0494
64.....	.....	0.02080	0.0238	0.0516
65.....	.....	0.02388	0.0259	0.0538
66.....	.....	0.02565	0.0282	0.0566
67.....	.....	0.02850	0.0311	0.0593
68.....	.....	0.03180	0.0345	0.0626
69.....	.....	0.03380	0.0382	0.0660
70.....	.....	0.03600	0.0427	0.0698
71.....	.....	0.03874	0.0500	0.0738
72.....	.....	0.04237	0.0650	0.0778
73.....	.....	0.04723	0.0900	0.0823
74.....	.....	0.05366	0.1300	0.0875
75.....	.....	0.06201	0.1900	0.0933
76.....	.....	0.07261	0.2600	0.0999
77.....	.....	0.08581	0.375	0.1070
78.....	.....	0.10196	0.75	0.1152
79.....	.....	0.12139	0.88	0.1248
80.....	.....	.....	.....	0.1358
81.....	.....	.....	.....	0.1497
82.....	.....	.....	.....	0.1647
83.....	.....	.....	.....	0.1820
84.....	.....	.....	.....	0.2020
85.....	.....	.....	.....	0.2250
86.....	.....	.....	.....	0.2525
87.....	.....	.....	.....	0.2840
88.....	.....	.....	.....	0.3180
89.....	.....	.....	.....	0.3580
90.....	.....	.....	.....	0.4040
91.....	.....	.....	.....	0.4560
92.....	.....	.....	.....	0.5110
93.....	.....	.....	.....	0.5750
94.....	.....	.....	.....	0.6500
95.....	.....	.....	.....	0.7340
96.....	.....	.....	.....	0.8180
97.....	.....	.....	.....	0.9020
98.....	.....	.....	.....	0.9850

The experience of the service relating to mortality among service and disability pensioners was too meagre to serve as a basis for determining these rates of mortality; consequently, we used the rates of the New York teachers' experience.

ACTIVE SERVICE TABLES AND SALARY SCALES.

The rates given in Tables XXXVII and XXXVIII, pp. 125 and 126 respectively, were used to construct the active service tables, Tables XXXIX and XL, on pp. 128 and 129, respectively. The salary scales were prepared as in the cases of the police and firemen's funds.

TABLE XXXIX.—(Female Teachers).

ACTIVE SERVICE TABLE AND SALARY SCALE.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Active service.	With-drawals.	Deaths.	Dis-ability retire-ments.	Service retire-ments.	Total decrements. Cols. 3+4+5+6.	Salary scale from active service Jan. 1, 1916.
20.....	100,000	350	60	.....	.....	410	\$ 745
21.....	99,590	996	70	.....	.....	1,066	765
22.....	98,524	2,099	77	.....	.....	2,176	790
23.....	96,548	2,987	82	.....	.....	3,069	815
24.....	93,279	4,291	86	.....	.....	4,377	850
25.....	88,902	4,899	89	.....	.....	4,988	880
26.....	83,914	4,909	91	.....	.....	5,000	920
27.....	78,914	4,798	92	.....	.....	4,890	965
28.....	74,224	4,552	91	.....	.....	4,643	1,010
29.....	69,381	4,239	91	.....	.....	4,330	1,050
30.....	65,051	3,864	91	.....	.....	3,955	1,095
31.....	61,096	3,330	90	.....	.....	3,420	1,135
32.....	57,676	2,826	90	.....	.....	2,916	1,170
33.....	54,760	2,453	90	.....	.....	2,543	1,210
34.....	52,217	2,167	90	.....	.....	2,257	1,240
35.....	49,960	1,933	91	10	.....	2,034	1,265
36.....	47,926	1,721	91	26	.....	1,838	1,290
37.....	46,088	1,521	92	39	.....	1,652	1,315
38.....	44,436	1,338	95	49	.....	1,482	1,340
39.....	42,954	1,168	98	56	.....	1,322	1,358
40.....	41,632	1,020	102	64	.....	1,186	1,370
41.....	40,446	874	107	70	.....	1,051	1,385
42.....	39,395	752	113	76	165	1,106	1,395
43.....	38,289	666	120	80	218	1,084	1,410
44.....	37,205	592	126	81	246	1,045	1,420
45.....	36,160	528	134	84	297	1,043	1,430
46.....	35,117	474	140	84	337	1,035	1,444
47.....	34,082	426	147	84	375	1,032	1,460
48.....	33,050	380	154	82	420	1,036	1,470
49.....	32,014	349	160	77	461	1,047	1,488
50.....	30,967	313	169	66	508	1,056	1,504
51.....	29,911	284	177	60	553	1,074	1,520
52.....	28,837	257	185	57	606	1,105	1,540
53.....	27,732	230	193	58	666	1,147	1,560
54.....	26,585	210	201	63	718	1,192	1,585
55.....	25,393	190	208	72	774	1,244	1,603
56.....	24,149	171	215	75	816	1,277	1,622
57.....	22,872	156	220	73	858	1,307	1,640
58.....	21,565	140	223	67	895	1,325	1,658
59.....	20,240	125	226	59	935	1,345	1,675
60.....	18,895	110	227	49	967	1,353	1,690
61.....	17,542	96	231	37	989	1,353	1,713
62.....	16,189	84	237	23	1,000	1,344	1,735
63.....	14,845	73	243	16	996	1,328	1,758
64.....	13,517	62	245	9	989	1,305	1,785
65.....	12,212	53	243	5	984	1,285	1,815
66.....	10,927	44	238	1	973	1,256	1,855
67.....	9,671	35	230	.....	959	1,224	1,908
68.....	8,447	26	220	.....	955	1,201	1,965
69.....	7,246	18	207	.....	949	1,174	2,035
70.....	6,072	10	189	.....	935	1,134	2,108
71.....	4,938	4	167	.....	914	1,085	2,210
72.....	3,853	.....	142	.....	805	947	2,318

TABLE XXXIX—Concluded.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age.	Active service.	With- drawals.	Deaths.	Dis- ability retire- ments.	Service retire- ments.	Total decre- ments. Cols. 3+ 4+5+6.	Salary scale from active service Jan. 1, 1916.
73.....	2,906	.....	117	.....	683	800	\$2,475
74.....	2,106	.....	92	.....	543	635	2,775
75.....	1,471	.....	70	.....	416	486	3,040
76.....	985	.....	51	.....	318	369	3,318
77.....	616	.....	35	.....	235	270	3,600
78.....	346	.....	23	.....	164	187	.....
79.....	159	.....	12	.....	95	107	.....
80.....	52	.....	.....	.....	44	44	.....
81.....	8	.....	.....	.....	8	8	.....
Totals.....	.....	65,193	8,286	1,752	24,769	100,000	.....

TABLE XL—(Male Teachers).

ACTIVE SERVICE TABLE AND SALARY SCALE.

(1)	(2)	(3)	(4)	(5)	(6)	Salary scale from active service Jan. 1, 1916.
Age.	Active service.	With- drawals.	Deaths.	Retire- ments.	Total de- crements. Cols. 3+4+5.	
19.....	100,000	3,150	112	.....	3,262	.....
20.....	96,738	3,173	124	.....	3,297	.....
21.....	93,441	3,177	135	.....	3,312	\$1,020
22.....	90,129	3,146	149	.....	3,295	1,040
23.....	86,834	3,057	158	.....	3,215	1,070
24.....	83,619	3,035	166	.....	3,201	1,120
25.....	80,418	2,943	178	.....	3,121	1,160
26.....	77,297	2,845	184	.....	3,029	1,220
27.....	74,268	2,763	195	.....	2,958	1,260
28.....	71,310	2,653	212	.....	2,865	1,325
29.....	68,445	2,532	240	.....	2,772	1,375
30.....	65,673	2,384	284	.....	2,668	1,430
31.....	63,005	2,262	340	.....	2,602	1,490
32.....	60,403	2,144	369	.....	2,513	1,550
33.....	57,890	1,968	364	.....	2,332	1,600
34.....	55,558	1,806	338	.....	2,144	1,650
35.....	53,414	1,629	312	.....	1,941	1,700
36.....	51,473	1,467	288	.....	1,755	1,740
37.....	49,718	1,268	265	.....	1,533	1,790
38.....	48,185	1,118	233	.....	1,351	1,840
39.....	46,834	1,002	192	.....	1,194	1,900
40.....	45,640	904	151	.....	1,055	1,960
41.....	44,585	811	141	.....	952	2,010
42.....	43,633	733	123	.....	856	2,050
43.....	42,777	672	118	.....	790	2,110
44.....	41,987	613	111	.....	724	2,160
45.....	41,263	557	106	.....	663	2,225
46.....	40,600	508	112	.....	620	2,275
47.....	39,980	468	130	.....	598	2,325
48.....	39,382	425	138	98	661	2,380
49.....	38,721	387	147	174	708	2,430
50.....	38,013	342	171	213	726	2,490
51.....	37,287	298	183	231	712	2,550
52.....	36,575	260	193	256	709	2,600
53.....	35,866	222	205	287	714	2,650
54.....	35,152	186	219	316	721	2,710
55.....	34,431	151	240	344	735	2,775
56.....	33,696	118	269	381	768	2,825
57.....	32,928	82	288	415	785	2,950
58.....	32,143	51	309	453	813	3,010
59.....	31,330	25	327	489	841	3,060
60.....	30,489	12	346	524	882	3,120
61.....	29,607	3	398	560	961	3,175
62.....	28,646	.....	445	587	1,032	3,230
63.....	27,614	.....	497	608	1,105	3,300

TABLE XL—Concluded.

(1)	(2)	(3)	(4)	(5)	(6)	Salary scale from active service Jan. 1, 1916.
Age.	Active service.	With- drawals.	Deaths.	Retire- ments.	Total de- crements. Cols. 3+4+5.	
64.....	26,509	.....	551	631	1,182	\$3,330
65.....	25,327	.....	592	656	1,248	3,375
66.....	24,079	.....	618	679	1,297	3,430
67.....	22,782	.....	649	709	1,358	3,480
68.....	21,424	.....	681	739	1,420	3,530
69.....	20,004	.....	676	764	1,440	3,590
70.....	18,565	.....	668	793	1,461	3,630
71.....	17,103	.....	663	855	1,518	3,680
72.....	15,585	.....	660	1,013	1,673	3,730
73.....	13,912	.....	657	1,252	1,909	3,780
74.....	12,003	.....	644	1,560	2,204	3,830
75.....	9,799	.....	608	1,862	2,470	3,880
76.....	7,329	.....	532	1,906	2,438	3,930
77.....	4,891	.....	420	1,834	2,254	3,960
78.....	2,637	.....	269	2,044	2,313	3,900
79.....	324	.....	39	285	324	4,010
Totals.....	.....	57,350	19,132	23,518	100,000	.....

CONTRIBUTIONS OF TEACHERS.

Teachers contribute from their salaries \$5 for each of the first five years of service, \$10 for each of the second five, \$15 for each of the third five, and \$30 each year thereafter while in active service. Thus, the contributions of individual teachers depend on the amount of service but are independent of the salary of the individual. In our treatment of the pension cost for the future service, we found it necessary to form an average contribution scale for each age. This is given in Tables XLI and XLII, below.

TABLE XLI.—(Female Teachers).
AVERAGE CONTRIBUTION SCALE WITH RESPECT TO AGES.

Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.
20....	\$5 00	30..	\$11 90	40..	\$24 50	50..	\$28 25	60..	\$29 37	70..	\$29 88
21....	5 00	31..	13 10	41..	25 60	51..	28 37	61..	29 42	71..	29 90
22....	5 03	32..	14 35	42..	26 20	52..	28 50	62..	29 50	72..	29 92
23....	5 20	33..	15 55	43..	26 65	53..	28 65	63..	29 57	73..	29 93
24....	5 55	34..	16 80	44..	26 95	54..	28 83	64..	29 61	74..	29 95
25....	5 95	35..	18 25	45..	27 20	55..	28 92	65..	29 65	75..	29 97
26....	6 75	36..	19 50	46..	27 45	56..	29 04	66..	29 70	76..	29 99
27....	8 00	37..	20 75	47..	27 65	57..	29 15	67..	29 75	77..	30 00
28....	9 25	38..	22 00	48..	27 85	58..	29 23	68..	29 80		
29....	10 60	39..	23 20	49..	28 05	59..	29 32	69..	29 85		

TABLE XLII.—(Male Teachers).
AVERAGE CONTRIBUTION SCALE WITH RESPECT TO AGES.

Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.	Age.	Contri- butions.
20....	\$5 00	30....	\$ 7 50	40....	\$17 80	50....	\$24 70	60....	\$29 00
21....	5 00	31....	8 20	41....	18 80	51....	25 20	61....	29 30
22....	5 00	32....	8 90	42....	19 50	52....	25 70	62....	29 60
23....	5 10	33....	9 70	43....	20 30	53....	26 20	63....	29 80
24....	5 20	34....	10 70	44....	21 20	54....	26 70	64....	29 90
25....	5 30	35....	11 70	45....	22 20	55....	27 10	65....	30 00
26....	5 50	36....	12 80	46....	22 80	56....	27 50	66....	30 00
27....	5 80	37....	14 20	47....	23 40	57....	27 90		
28....	6 30	38....	15 50	48....	23 80	58....	28 30		
29....	6 80	39....	16 70	49....	24 30	59....	28 70		

DISABILITY PENSION SCALE.

The amount of the disability pension is such that its ratio to \$400 equals the ratio of the contributions of the individual to \$450. From the average of the disability pensions at given ages, we formed the graduated scale shown in Table XLIII, below. This scale we used in the calculation of the probable cost of pensions to future entrants upon disability pensions.

TABLE XLIII.—(Female Teachers).

AVERAGE DISABILITY PENSION SCALE CLASSIFIED WITH REGARD TO AGE.

Age.	Pension.	Age.	Pension.	Age.	Pension.	Age.	Pension.
33.....	\$166	43.....	\$293	53.....	\$305	63.....	\$310
34.....	171	44.....	297	54.....	305	64.....	310
35.....	180	45.....	299	55.....	306	65.....	311
36.....	193	46.....	301	56.....	306	66.....	311
37.....	210	47.....	302	57.....	307	67.....	312
38.....	230	48.....	302	58.....	307	68.....	312
39.....	246	49.....	303	59.....	308	69.....	313
40.....	261	50.....	303	60.....	308	70.....	313
41.....	279	51.....	304	61.....	309		
42.....	288	52.....	304	62.....	309		

NUMBER AND PRESENT PENSIONS OF PENSIONERS.

In Tables XLIV and XLV, below, are shown the number and present pensions of female pensioners, while Table XLVI, p. 135, shows the same for male pensioners. Since there is only one male disability pensioner, he is included with the service pensioners.

TABLE XLIV.—(Female Teachers).

THE NUMBER AND PENSIONS OF SERVICE PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age.	Number.	Total pensions.	Age.	Number.	Total pensions.	Age.	Number.	Total pensions.
42.....	1	\$ 400	58.....	23	\$8,174	74.....	6	\$2,173
43.....			59.....	23	8,293	75.....	3	1,052
44.....	2	767	60.....	25	9,116	76.....	9	3,323
45.....	4	1,600	61.....	14	5,138	77.....	5	1,753
46.....	5	2,000	62.....	18	6,623	78.....	1	400
47.....	6	2,296	63.....	15	5,637	79.....	4	1,480
48.....	12	4,518	64.....	12	4,483	80.....	1	370
49.....	11	3,977	65.....	17	6,572	81.....	1	370
50.....	18	6,394	66.....	11	4,280	82.....	4	1,510
51.....	23	8,476	67.....	5	1,970	83.....	3	1,059
52.....	26	9,375	68.....	11	4,320	84.....		
53.....	12	6,366	69.....	10	3,733	85.....	1	370
54.....	28	10,459	70.....	12	4,576	86.....	2	676
55.....	16	5,806	71.....	5	1,905			
56.....	19	7,053	72.....	12	4,275	Totals	467	\$172,690
57.....	17	6,470	73.....	8	3,102			

TABLE XLV.—(Female Teachers).

THE NUMBER AND PENSIONS OF DISABILITY PENSIONERS AS OF JANUARY 1, 1916, CLASSIFIED WITH REGARD TO AGE.

Age.	Number.	Total pensions.	Age.	Number.	Total pensions.	Age.	Number.	Total pensions.
36.....	1	\$153	48.....	3	\$1,016	58.....	3	\$ 746
38.....	1	150	49.....	5	1,176	59.....	4	1,168
40.....	2	587	50.....	2	653	60.....	1	162
41.....	1	210	51.....	2	628	61.....	1	328
42.....	1	213	52.....	1	325	64.....	1	168
43.....	1	168	53.....	3	804	68.....	1	370
44.....	4	917	54.....	2	582	71.....	1	350
45.....	1	181	55.....	5	1,815			
46.....	2	562	56.....	2	741	Totals	54	\$14,992
47.....	2	675	57.....	1	144			

CLASSES OF PENSIONERS, PRESENT AND FUTURE.

In making our calculations, the whole group under observation, both male and female, was divided into three classes, as follows:

1. Those on the pension roll January 1, 1916.
2. Those in active service January 1, 1916.
3. Those who enter service after January 1, 1916.

On account of the fact that teachers retired under previous acts have their pensions graduated so as to receive not less than \$320 nor more than the maximum benefit provided by the present law, not all service pensioners on the roll at present receive \$400.

THOSE ON THE PENSION ROLL JANUARY 1, 1916.

In Table XLVII, p. 135, is shown a yearly valuation of the future costs for female pensioners on the pension roll, January 1, 1916. The yearly future costs for male pensioners, however, which consists of only one column, is shown in Table LI, p. 142.

THOSE IN ACTIVE SERVICE JANUARY 1, 1916.

Table XLVIII, p. 136, exhibits the yearly future costs of pensions for female teachers in active service January 1, 1916. The yearly future costs for male teachers, which consists of only one column, is shown in Table LI, p. 142.

THOSE WHO ENTER SERVICE AFTER JANUARY 1, 1916.

Table XLIX, p. 137, exhibits the yearly future costs of pensions for female teachers who enter the service after January 1, 1916. The corresponding table of costs for male teachers is given in Table LI, p. 142.

From actual experience, female teachers appear to enter at an average age of a little over 26. We have, therefore, assumed 26 as the age for future female entrants into the staff. If we take for granted that the same mortality, withdrawal and retirement rates will be realized in the future as in the period from January 1, 1906, to January 1, 1916, 366 female teachers will enter annually if the number of female teachers of January 1, 1916, be maintained in the schools. The yearly pension costs for future female entrants as shown in Table XLIX, p. 137, are based on this assumption.

The average age of entrance for male teachers is considerably higher than for female teachers, being a little over 31 years. Therefore, in making our valuation for the future yearly costs of pensions to new male entrants, we have assumed 31 to be the age at which they will enter the service. Table LI, p. 142, exhibits the yearly costs to be expected for those entering the service if the male staff is kept at its present size.

TABLE L.

This table contains the totals of Tables XLVII, XLVIII and XLIX, and thus includes the total costs of pensions by years for female teachers in this fund. It also gives for each year, until the system carries its normal load, the ratios of pension payments to salaries, the percentages of salaries contributed to pensions by female teachers, and the percentages of salaries that must be contributed from

sources other than contributions by female teachers to maintain pensions for such teachers under the present plan.

HYPOTHESIS I AND HYPOTHESIS II, AND REASONS THEREFOR.

When teachers enter the Chicago schools with experience, that experience up to ten years may be counted towards service for a service pension, and it may be counted up to six years towards a disability pension. Because of the high age at entrance of both male and female teachers, it is reasonable to assume that a number enter with experience that counts as years of service towards a pension. On account of this fact, and because we may reasonably expect this condition to continue, we have treated the problem of future entrants under two hypotheses. Under what we call Hypothesis I, we assume that teachers enter without experience that counts as years of service towards a pension. Under what we call Hypothesis II, we assume that teachers entering the Chicago schools at a certain age, have the same experience as teachers of this age whose entire active service has been in the Chicago schools. There is little doubt but that the most probable condition in regard to experience conforms more nearly to Hypothesis II than to Hypothesis I. However, Hypothesis II gives on the whole a little too much credit for experience outside Chicago. Hence, the results to be most strongly anticipated lie between those given under the two hypotheses, but much nearer those given by Hypothesis II, than those under Hypothesis I.

TABLE LI.

This table for male teachers corresponds entirely to Table L, p. 140, for female teachers.

TABLE LII.

This table contains the totals of Tables L, p. 140, and LI, p. 142, and thus includes the total expected costs of pensions for both males and females by years under this fund. It also gives, for each year until the system carries its normal load, the ratios of pension payments to salaries, the percentages of salaries contributed to pensions by all teachers and the percentages of salaries that must be contributed from sources other than contributions by employees to maintain pensions under the present plan.

REFUNDS.

The law provides that in case of dismissal the full amount of the contributions shall be returned, and that in case of voluntary resignation with less than 15 years of service, one-half the contributions shall be returned. While the experience is meagre to determine the effect of this feature on the condition of the fund, it is a feature that will probably approach an almost stationary value before many years, as the refunds apply mainly to early years of service.

We therefore give the following as the experience of the past few years with reference to refunds:

October 1, 1909 to October 1, 1910.....	\$ 243 79
October 1, 1910 to October 1, 1911.....	1,007 81
October 1, 1911 to October 1, 1912.....	688 49
October 1, 1912 to October 1, 1913.....	873 00
October 1, 1913 to October 1, 1914.....	810 47

It is pretty clear from this experience that the refunds are an item of relatively small significance.

TABLE LIII.

The balance sheet in Table LIII, p. 146, gives the present value of assets and liabilities for present pensioners and for the present active service. For further reference to it, see p. 79.

In it we have estimated the item of refunds for the present active service at \$800 per year for the ten years for which data was studied. While this may be a slight undervaluation of this liability, the error is not large enough to have any practical significance.

The present value, with a 4 per cent interest rate, of the liabilities for pensions is \$10,795,641. The present value of the contributions from teachers is \$2,081,935, and of that guaranteed by law from the board of education is \$2,081,935. The capital on hand is \$1,030,572. This means that there is a deficiency having a present value of \$5,601,199.

PRESENT AND FUTURE COSTS.

It may be noted that the pension payments for male teachers will in 1916 amount to 0.6 per cent of salaries, and that this will increase until the pension cost in about 50 years will be 2.5 per cent of salaries. Later there will be a slight decrease to 2.2 per cent of salaries. The average contribution of male teachers amounts to approximately 0.9 per cent of average salary, and if such contribution had been made by each teacher since he entered the service, assuming 31 as the average age at entrance, this would almost support the system for male teachers. But, in spite of the fact that the board of education contributes an amount equal to that contributed by teachers, there is an accrued liability on male teachers, as shown in the balance sheet (Table LIII, p. 146). This is almost entirely due to the fact that teachers began to contribute only at the time of the inauguration of the pension system. Adequate contributions for future entrants at young ages are inadequate for older persons, such as were in the service of the schools at the time when this pension system was put into operation.

It may be noted that the pension payments for female teachers will, in 1916, amount to 2.2 per cent of average salaries, and that this will increase until the pension cost in 32 years from now will be about 8.5 per cent of salaries.

The average contributions of female teachers vary from 1.5 per cent to 1.6 per cent of average salaries. To support the pension system for such teachers, assuming the average age of entrance as 26, would require a deduction of 2.95 per cent of salaries.

OBSERVATIONS REGARDING THE DEFICIENCY.

The contributions from teachers and equal contributions from the board of education taken together are adequate to provide pensions for future entrants, and leave a surplus under Hypothesis II of approximately \$35,000 per year.

The present value of the deficiency of \$5,601,199 shown in the balance sheet (p. 146) is due to accrued liabilities that were assumed when the pension system was started, and to the fact that the system

was in operation for a number of years before the Board of Education began to contribute on the present basis.

However, the sum of \$35,000 per year is not sufficient to pay the interest on this deficiency at 4 per cent per annum, and consequently the deficiency will increase under the present plan of contributing to the fund.

TABLE XLVI.—(Male Teachers).

THE NUMBER AND PENSIONS OF PENSIONERS AS OF JANUARY 1, 1916,
CLASSIFIED WITH REGARD TO AGE.

Age.	Number.	Total pensions.	Age.	Number.	Total pensions.	Age.	Number.	Total pensions.
52.....	1	\$ 400	65.....			78.....	1	\$400
53.....	0		66.....			79.....	1	400
54.....	1	400	67.....	1	\$400	80.....	1	370
55.....			68.....	1	137	81.....	2	770
56.....			69.....	2	800	82.....		
57.....	1	400	70.....	2	800	83.....		
58.....			71.....			84.....		
59.....	1	400	72.....	1	400	85.....	2	740
60.....			73.....	1	400	86.....		
61.....			74.....			87.....		
62.....			75.....			Totals	23	\$8,757
63.....	1	400	76.....					
64.....	3	1,140	77.....					

TABLE XLVII.—(Female Teachers).

PENSIONS ACCRUING TO PERSONS ON PENSION ROLL JANUARY 1, 1916.

Year.	Service pensioners.	Disability pensioners.	Total pensions.	Year.	Service pensioners.	Disability pensioners.	Total pensions.
1916.....	\$170,132	\$14,750	\$184,882	1946.....	\$20,024	\$2,151	\$22,175
1917.....	164,972	14,267	179,239	1947.....	17,148	1,891	19,039
1918.....	159,694	13,787	173,481	1948.....	14,634	1,651	16,285
1919.....	154,345	13,309	167,654	1949.....	12,258	1,434	13,692
1920.....	148,971	12,837	161,808	1950.....	10,202	1,239	11,441
1921.....	143,548	12,361	155,909	1951.....	8,394	1,061	9,455
1922.....	138,078	11,884	149,962	1952.....	6,820	902	7,722
1923.....	132,565	11,410	143,975	1953.....	5,472	761	6,233
1924.....	127,023	10,943	137,966	1954.....	4,330	639	4,969
1925.....	121,958	10,485	132,443	1955.....	3,376	529	3,905
1926.....	116,383	10,023	126,406	1956.....	2,610	432	3,042
1927.....	110,305	9,560	119,865	1957.....	1,991	350	2,341
1928.....	104,732	9,103	113,835	1958.....	1,513	280	1,793
1929.....	99,186	8,650	107,836	1959.....	1,137	222	1,359
1930.....	93,649	8,199	101,848	1960.....	810	175	985
1931.....	88,158	7,750	95,908	1961.....	564	137	701
1932.....	82,803	7,307	90,110	1962.....	384	106	490
1933.....	77,428	6,873	84,301	1963.....	256	80	336
1934.....	71,950	6,443	78,393	1964.....	166	59	225
1935.....	66,736	6,021	72,757	1965.....	104	42	146
1936.....	61,712	5,601	67,313	1966.....	62	29	91
1937.....	56,718	5,089	61,807	1967.....	38	19	57
1938.....	51,866	4,795	56,661	1968.....	22	12	34
1939.....	47,174	4,414	51,588	1969.....	12	7	19
1940.....	42,658	4,045	46,703	1970.....	4	3	7
1941.....	38,335	3,689	42,024	1971.....	1	1	2
1942.....	34,222	3,347	37,569	1972.....			
1943.....	30,340	3,021	33,361	Totals...	\$2,897,978	\$259,313	\$3,157,291
1944.....	26,700	2,713	29,413				
1945.....	23,305	2,425	25,730				

TABLE XLVIII.—(Female Teachers).

PENSIONS ACCRUING TO THOSE IN ACTIVE SERVICE JANUARY 1, 1916.

Year.	Service pensioners.	Disability pensioners.	Total pensions.	Contributions.	Future salaries to present active service.
1916.....	\$ 10,204	\$ 1,103	\$ 11,307	\$133,179	\$8,705,813
1917.....	31,163	3,313	34,476	132,444	8,489,283
1918.....	53,077	5,530	58,607	131,533	8,281,761
1919.....	76,101	7,726	83,827	130,281	8,063,991
1920.....	100,316	9,912	110,228	128,868	7,839,881
1921.....	125,375	12,010	137,385	127,145	7,624,936
1922.....	151,580	14,103	165,683	124,838	7,401,607
1923.....	179,094	16,045	195,139	122,339	7,176,415
1924.....	207,080	17,940	225,020	119,622	6,954,864
1925.....	235,997	19,776	255,773	116,522	6,719,310
1926.....	265,783	21,339	287,122	113,281	6,495,127
1927.....	295,583	22,906	318,579	109,831	6,266,389
1928.....	325,764	24,545	350,309	106,147	6,029,581
1929.....	356,089	25,905	381,994	102,351	5,795,136
1930.....	386,130	27,209	413,339	98,371	5,558,104
1931.....	415,908	28,233	444,141	94,178	5,313,698
1932.....	444,908	29,190	474,098	89,970	5,074,566
1933.....	473,156	29,994	503,150	85,564	4,833,179
1934.....	499,814	30,645	530,459	81,183	4,589,878
1935.....	525,834	31,135	556,969	76,662	4,349,808
1936.....	550,001	31,565	581,566	72,095	4,109,105
1937.....	572,272	31,652	603,924	67,598	3,871,104
1938.....	592,412	31,658	624,070	63,113	3,626,101
1939.....	609,962	31,439	641,401	58,698	3,401,800
1940.....	624,751	31,179	655,930	54,496	3,176,913
1941.....	637,233	30,718	667,951	50,318	2,952,860
1942.....	645,271	30,124	675,395	46,268	2,739,326
1943.....	652,552	29,423	681,975	42,499	2,525,090
1944.....	655,822	28,575	684,397	38,768	2,323,578
1945.....	655,869	27,678	683,547	35,244	2,131,620
1946.....	652,186	26,706	678,892	31,890	1,941,603
1947.....	645,763	25,780	671,543	28,744	1,765,581
1948.....	635,951	24,614	660,565	25,773	1,595,146
1949.....	623,965	23,512	647,477	23,004	1,433,293
1950.....	607,932	22,340	630,272	20,400	1,284,268
1951.....	591,413	21,154	612,567	18,117	1,141,891
1952.....	571,663	19,919	591,582	15,833	1,012,498
1953.....	549,739	18,663	568,402	13,815	891,559
1954.....	526,342	17,406	543,748	11,977	782,796
1955.....	501,478	16,147	517,625	10,334	681,284
1956.....	475,489	14,893	490,382	8,855	589,552
1957.....	448,777	13,675	462,452	7,590	509,010
1958.....	421,659	12,513	434,172	6,313	433,007
1959.....	394,350	11,369	405,719	5,245	366,567
1960.....	367,108	10,287	377,395	4,302	307,121
1961.....	340,200	9,272	349,472	3,471	254,547
1962.....	313,752	8,326	322,078	2,754	207,908
1963.....	287,942	7,424	295,366	2,131	166,046
1964.....	262,821	6,601	269,422	1,606	139,744
1965.....	238,471	5,840	244,311	1,178	100,508
1966.....	215,001	5,136	220,137	834	74,424
1967.....	192,503	4,492	196,995	669	54,378
1968.....	171,055	3,904	174,959	375	37,598
1969.....	150,873	3,372	154,245	268	24,591
1970.....	131,978	2,898	134,876	143	15,169
1971.....	114,476	2,466	116,942	73	8,121
1972.....	98,390	2,082	100,472	35	3,828
1973.....	83,783	1,744	85,527	15	1,484
1974.....	70,669	1,451	72,120	5	432
1975.....	58,974	1,187	60,161	2	84
1976.....	48,684	966	49,650	.....	3
1977.....	39,722	774	40,496	.....	.....
1978.....	32,005	613	32,618	.....	.....
1979.....	25,431	474	25,905	.....	.....
1980.....	19,908	366	20,274	.....	.....
1981.....	15,338	277	15,615	.....	.....
1982.....	11,356	207	11,563	.....	.....
1983.....	8,595	150	8,745	.....	.....
1984.....	6,254	107	6,361	.....	.....
1985.....	4,409	72	4,481	.....	.....
1986.....	3,056	51	3,107	.....	.....
1987.....	2,061	33	2,094	.....	.....
1988.....	1,306	20	1,326	.....	.....
1989.....	846	12	858	.....	.....
1990.....	511	7	518	.....	.....
1991.....	298	4	302	.....	.....

TABLE XLVIII—(Female Teachers)—Concluded.

Year.	Service pensioners.	Disability pensioners.	Total pensions.	Contributions.	Future salaries to present active service.
1902.....	\$166		\$166		
1903.....	85		85		
1904.....	39		39		
1905.....	14		14		
1906.....	5		5		
1907.....	1		1		
1908.....					
Totals.....	\$22,319,894	\$1,031,966	\$23,351,860	\$2,999,157	\$178,235,867
Present values. Interest 4 per cent.	\$7,723,768	\$425,951	\$8,149,719	\$1,860,444	

TABLE XLIX.—(Female Teachers).
PENSIONS ACCRUING TO FUTURE ENTRANTS.

Year.	Service Hypothesis I.	Disability Hypothesis I.	Total Hypothesis I.	Contributions Hypothesis I.	Service Hypothesis II.	Disability Hypothesis II.	Total Hypothesis II.	Contributions Hypothesis II.	Salaries to future entrants.
1916.....				\$ 888				\$ 1,198	\$ 183,344
1917.....				2,558				3,870	485,661
1918.....				4,124				6,787	801,965
1919.....				5,590				9,875	1,109,793
1920.....				6,966				13,149	1,411,027
1921.....				9,556				16,542	1,705,013
1922.....				12,008				20,034	1,991,898
1923.....				14,341				23,662	2,274,183
1924.....				16,569				27,405	2,550,487
1925.....				18,704		\$ 4	\$ 4	31,501	2,820,527
1926.....				21,779		22	22	35,299	3,068,036
1927.....				24,740		68	68	39,395	3,344,490
1928.....				27,590		155	155	43,588	3,599,868
1929.....				30,366		294	294	47,868	3,849,819
1930.....				33,051		495	495	52,254	4,095,044
1931.....				38,274		769	769	56,712	4,336,194
1932.....	\$ 42	\$ 42		43,371	\$ 143	1,126	1,269	61,146	4,572,283
1933.....	172	172		48,290	617	1,571	2,188	65,534	4,804,422
1934.....	396	396		53,090	1,487	2,107	3,594	69,846	5,031,611
1935.....	717	717		57,753	2,817	2,735	5,552	74,074	5,253,889
1936.....	1,135	1,135		62,280	4,680	3,455	8,135	78,216	5,471,950
1937.....				66,672	7,135	4,265	11,400	82,264	5,685,697
1938.....	2,262	2,262		70,929	10,245	5,160	15,405	86,216	5,894,278
1939.....	2,964	2,964		75,049	14,073	6,134	20,207	90,069	6,098,650
1940.....	3,750	3,750		79,032	18,684	7,173	25,857	93,820	6,298,326
1941.....	4,607	4,607		82,875	24,142	8,264	32,406	97,455	6,493,065
1942.....	\$ 479	5,521	6,000	86,576	30,516	9,399	39,915	100,971	6,683,045
1943.....	1,953	6,484	8,437	90,129	37,886	10,575	48,461	104,365	6,867,831
1944.....	4,503	7,493	11,996	93,529	46,328	11,794	58,122	107,633	7,047,485
1945.....	8,208	8,550	16,758	96,770	55,912	13,062	68,974	110,758	7,220,351
1946.....	13,134	9,662	22,796	99,846	66,696	14,385	81,081	113,736	7,386,673
1947.....	19,347	10,834	30,181	102,753	78,724	15,760	94,484	116,561	7,545,599
1948.....	26,890	12,063	38,953	105,488	92,033	17,179	109,212	119,226	7,696,753
1949.....	35,801	13,341	49,142	108,048	106,792	18,630	125,422	121,728	7,839,703
1950.....	46,101	14,656	60,757	110,432	122,749	20,097	142,846	124,062	7,973,900
1951.....	57,838	15,992	73,830	112,639	140,045	21,563	161,608	126,226	8,099,996
1952.....	71,006	17,333	88,339	114,069	158,660	23,009	181,669	128,223	8,217,555
1953.....	85,588	18,658	104,246	116,524	178,547	24,419	202,966	130,052	8,326,291
1954.....	101,538	19,952	121,490	118,207	199,636	25,782	225,418	131,713	8,476,443
1955.....	118,791	21,204	139,995	119,721	221,850	27,038	248,943	133,209	8,518,027
1956.....	137,273	22,410	159,683	121,069	245,101	28,344	273,445	134,543	8,601,354
1957.....	159,081	23,561	182,642	122,254	269,284	29,531	298,815	135,718	8,676,743
1958.....	179,753	24,653	204,406	123,281	294,292	30,654	324,946	136,738	8,743,817
1959.....	201,368	25,687	227,055	124,152	320,012	31,713	351,725	137,605	8,802,776
1960.....	223,820	26,662	250,482	124,873	346,314	32,709	379,023	138,322	8,853,390
1961.....	246,984	27,578	274,562	125,448	373,045	33,642	406,687	138,895	8,895,754
1962.....	270,714	28,136	299,150	125,890	399,961	34,512	434,473	139,335	8,929,916
1963.....	294,773	29,236	324,009	126,218	426,733	35,320	462,053	139,662	8,956,968

TABLE XLIX.—(Female Teachers)—Concluded.

Year.	Service Hy- pothesis I.	Disability Hy- pothesis I.	Total Hypoth- esis I.	Contributions Hypothesis I.	Service Hy- pothesis II.	Disability Hy- pothesis II.	Total Hypoth- esis II.	Contributions Hypothesis II.	Salaries to future en- trants.
1964.....	\$318,836	\$29,980	\$348,816	\$126,442	\$453,007	\$36,067	\$489,074	\$139,896	\$8,978,608
1965.....	342,556	30,667	373,223	126,663	478,438	36,753	515,191	140,057	8,994,890
1966.....	365,594	31,299	396,893	126,708	502,733	37,380	540,113	140,162	9,006,467
1967.....	387,656	31,876	419,532	126,771	525,656	37,948	563,604	140,225	9,014,020
1968.....	408,515	32,399	440,914	126,804	547,018	38,460	585,478	140,258	9,017,977
1969.....	427,995	32,870	460,865	126,818	566,668	38,916	605,584	140,272	9,019,626
1970.....	445,922	33,290	479,212	126,822	584,491	39,319	623,810	140,276	9,019,673
1971.....	462,193	33,661	495,854	.....	600,433	39,671	640,104	140,277	9,019,679
1972.....	476,750	33,985	510,735	.....	614,499	39,975	654,474	.....	.....
1973.....	489,594	34,265	523,859	.....	626,759	40,234	666,993	.....	.....
1974.....	500,789	34,503	535,292	.....	637,307	40,451	677,758	.....	.....
1975.....	510,420	34,703	545,123	.....	646,251	40,631	686,882	.....	.....
1976.....	518,587	34,869	553,456	.....	653,717	40,778	694,495	.....	.....
1977.....	525,404	35,004	560,408	.....	659,843	40,895	700,738	.....	.....
1978.....	530,998	35,112	566,110	.....	664,776	40,987	705,763	.....	.....
1979.....	535,503	35,197	570,700	.....	668,669	41,058	709,727	.....	.....
1980.....	539,057	35,262	574,319	.....	671,673	41,112	712,785	.....	.....
1981.....	541,800	35,311	577,111	.....	673,935	41,152	715,087	.....	.....
1982.....	543,866	35,347	579,213	.....	675,594	41,180	716,774	.....	.....
1983.....	545,381	35,373	580,754	.....	676,776	41,200	717,976	.....	.....
1984.....	546,460	35,391	581,851	.....	677,592	41,213	718,805	.....	.....
1985.....	547,205	35,403	582,608	.....	678,136	41,222	719,358	.....	.....
1986.....	547,702	35,411	583,113	.....	678,485	41,227	719,712	.....	.....
1987.....	548,021	35,416	583,437	.....	678,700	41,230	719,930	.....	.....
1988.....	548,218	35,419	583,637	.....	678,827	41,232	720,059	.....	.....
1989.....	548,354	35,421	583,755	.....	678,898	41,233	720,131	.....	.....
1990.....	548,399	35,422	583,821	.....	678,936	41,234	720,170	.....	.....
1991.....	548,434	35,422	583,856	.....	678,955	41,234	720,189	.....	.....
1992.....	548,451	35,422	583,873	.....	.....	.....	.....	.....	.....
Totals.	\$16,653,583	\$1,401,362	\$18,054,945	\$4,261,989	\$21,851,911	\$1,676,961	\$23,528,872	\$5,118,263	\$349,274,723

TABLE L.—(Female Teachers).
SHOWING COMBINED ANNUAL CONTRIBUTIONS AND PENSION PAYMENTS FOR ALL CLASSES, AND PERCENTAGES THESE PAYMENTS ARE OF TOTAL SALARIES.

Year	(1) Pensions to present pensioners.	(2) Pensions to persons now in active service.	(3) Pensions to future entrants into service. Hypothesis I.	(4) Grand total of all pensions Cois. (1) + (2) + (3). Hypothesis I.	(5) Total salaries.	(6) Total contributions. Hypothesis I.	(7) Pensions to future entrants into service. Hypothesis II.	(8) Grand total of all pensions Cois. (1) + (2) + (7). Hypothesis II.	(9) Total contributions. Hypothesis II.	(10) Ratios of pension payments to salaries expressed in percentages. Cois. (8) ÷ (9). Hypothesis II.	(11) Percentages of salary contributed by teachers under Hypothesis II.	(12) Percentages to be provided for by city or unprovided for under Hypothesis II.
1916.	\$184,882	\$ 11,307	.....	\$196,189	\$8,869,157	\$134,067	.....	\$196,189	\$134,377	2.2	1.5	0.7
1917.	179,239	34,476	.....	213,715	8,974,944	135,002	.....	213,715	136,314	2.4	1.5	0.9
1918.	173,481	58,607	.....	232,088	9,083,826	135,657	.....	232,088	138,300	2.6	1.5	1.1
1919.	107,654	83,837	.....	251,481	9,173,784	135,871	.....	251,481	140,156	2.7	1.5	1.2
1920.	161,808	110,238	.....	272,036	9,250,908	135,834	.....	272,036	142,017	2.9	1.5	1.4
1921.	155,909	137,385	.....	293,294	9,329,949	136,702	.....	293,294	143,688	3.1	1.5	1.6
1922.	149,962	165,683	.....	315,645	9,393,505	136,846	.....	315,645	144,872	3.4	1.5	1.9
1923.	143,975	195,139	.....	339,114	9,450,598	136,680	.....	339,114	146,001	3.6	1.5	2.1
1924.	137,968	225,090	.....	363,058	9,505,351	136,191	.....	363,058	147,027	3.8	1.5	2.3
1925.	132,443	255,773	.....	388,216	9,539,837	135,226	\$ 4	388,220	147,823	4.1	1.5	2.6
1926.	126,406	287,122	.....	413,528	9,581,163	135,060	22	413,550	148,580	4.3	1.6	2.7
1927.	119,865	318,579	.....	438,444	9,610,879	134,571	88	438,512	149,226	4.6	1.6	3.0
1928.	113,835	350,309	.....	464,144	9,629,449	133,737	155	464,299	149,735	4.8	1.6	3.2
1929.	107,836	381,994	.....	489,830	9,644,955	132,717	294	490,124	150,219	5.1	1.6	3.5
1930.	101,848	413,339	.....	515,187	9,653,148	131,422	495	515,682	150,695	5.3	1.6	3.7
1931.	95,908	444,141	.....	540,049	9,649,892	132,452	769	540,818	150,890	5.6	1.6	4.0
1932.	90,110	474,098	\$ 42	564,250	9,646,849	133,341	1,269	565,477	151,116	5.9	1.6	4.3
1933.	84,301	503,150	172	587,623	9,637,601	133,854	2,188	589,639	151,098	6.1	1.6	4.5
1934.	78,393	530,459	396	609,248	9,621,429	134,273	3,594	612,446	151,029	6.4	1.6	4.8
1935.	72,757	556,969	717	630,443	9,603,697	134,415	5,582	635,278	150,736	6.6	1.6	5.0
1936.	67,313	581,566	1,135	650,014	9,581,055	134,375	8,135	657,014	150,311	6.9	1.6	5.3
1937.	61,807	603,924	1,651	667,882	9,556,801	134,290	11,400	677,131	149,862	7.1	1.6	5.5
1938.	56,661	624,070	2,262	682,963	9,520,379	134,042	15,405	696,136	149,329	7.3	1.6	5.7
1939.	51,588	641,401	2,964	695,953	9,500,450	133,747	20,207	713,196	148,767	7.5	1.6	5.9
1940.	46,703	655,950	3,750	706,363	9,475,239	133,528	25,857	728,490	148,316	7.7	1.6	6.1
1941.	42,094	667,951	4,607	714,582	9,445,925	133,193	32,406	742,381	147,773	7.9	1.6	6.3
1942.	37,569	675,395	6,000	718,964	9,422,371	132,844	39,915	752,879	147,239	8.0	1.6	6.4

TABLE L.—(Female Teachers)—Concluded.

Year.	(1) Pensioners to present pensioners.	(2) Pensions to persons now in active service.	(3) Pensions to future entrants into service. Hypothesis I.	(4) Grand total of all pensions Cois. (1)+(2)+(3). Hypothesis I.	(5) Total salaries.	(6) Total contributions. Hypothesis I.	(7) Pensions to future entrants into service. Hypothesis II.	(8) Grand total of all pensions Cois. (1)+(2)+(7). Hypothesis II.	(9) Total contributions. Hypothesis II.	(10) Ratios of pension payments to salaries expressed in percentages Cois. (8)÷(5). Hypothesis II.	(11) Percentages of salary contributed by teachers under Hypothesis II.	(12) Percentages to be provided for by city or unprovided for under Hypothesis II.
1943.....	\$33,361	\$681,975	\$ 8,437	\$723,773	\$9,392,921	\$132,638	\$ 48,461	\$763,797	\$146,884	8.1	1.6	6.5
1944.....	29,413	684,397	11,996	725,806	9,371,063	132,297	58,122	771,932	146,401	8.2	1.6	6.6
1945.....	25,720	683,547	16,756	726,033	9,351,971	132,014	68,974	778,251	146,002	8.3	1.6	6.7
1946.....	22,175	678,892	22,796	726,863	9,328,276	131,736	81,081	782,148	145,626	8.4	1.6	6.8
1947.....	19,039	671,543	30,181	720,763	9,311,180	131,497	94,484	785,066	145,305	8.4	1.6	6.8
1948.....	16,285	660,565	38,953	715,803	9,291,869	131,261	109,212	786,062	144,909	8.5	1.6	6.9
1949.....	13,692	647,477	49,142	702,311	9,272,996	131,052	125,422	786,591	144,732	8.5	1.6	6.9
1950.....	11,441	630,272	60,757	702,470	9,259,258	130,832	142,846	784,559	144,462	8.5	1.6	6.9
1951.....	9,455	612,567	73,839	685,852	9,241,887	130,756	161,608	783,630	144,343	8.5	1.6	6.9
1952.....	7,722	591,582	88,339	687,643	9,230,053	130,502	181,669	780,973	144,056	8.5	1.6	6.9
1953.....	6,223	568,402	104,246	678,881	9,217,850	130,339	202,963	777,601	143,867	8.4	1.6	6.8
1954.....	4,969	543,748	121,490	670,207	9,203,241	130,184	225,418	774,125	143,680	8.4	1.6	6.8
1955.....	3,905	517,625	139,965	666,595	9,190,311	130,055	248,943	770,473	143,543	8.4	1.6	6.8
1956.....	3,042	490,382	159,632	653,107	9,185,753	129,915	273,445	766,869	143,398	8.4	1.6	6.8
1957.....	2,341	462,452	182,642	647,485	9,176,834	129,844	298,815	763,608	143,308	8.3	1.6	6.7
1958.....	1,733	434,172	204,406	640,371	9,168,934	129,594	324,946	760,911	143,051	8.3	1.6	6.7
1959.....	1,359	405,719	227,055	634,133	9,160,343	129,397	351,725	758,803	142,850	8.3	1.6	6.7
1960.....	985	377,385	250,482	628,862	9,150,511	129,175	379,023	757,403	142,634	8.3	1.6	6.7
1961.....	701	349,472	274,362	624,735	9,137,884	128,919	406,087	756,860	142,366	8.3	1.6	6.7
1962.....	480	322,078	299,150	621,718	9,123,014	128,644	434,473	757,041	142,089	8.3	1.6	6.7
1963.....	336	295,366	324,009	619,711	9,109,352	128,349	462,053	757,755	141,793	8.3	1.6	6.7
1964.....	225	269,422	348,816	618,463	9,095,398	128,048	489,074	758,721	141,502	8.3	1.6	6.7
1965.....	146	244,311	373,223	617,680	9,080,891	127,781	515,191	759,648	141,235	8.4	1.6	6.8
1966.....	91	220,137	398,893	617,121	9,065,398	127,542	540,113	760,341	140,996	8.4	1.6	6.8
1967.....	57	174,959	419,532	616,584	9,048,398	127,440	563,604	760,656	140,891	8.4	1.6	6.8
1968.....	34	154,245	440,913	615,906	9,035,575	127,178	585,478	760,471	140,632	8.4	1.6	6.8
1969.....	19	134,873	460,865	615,139	9,044,217	127,086	605,584	758,848	140,540	8.4	1.6	6.8
1970.....	7	119,942	479,219	614,102	9,039,842	126,865	625,810	758,693	140,419	8.4	1.6	6.8
1971.....	2	116,942	495,854	612,798	9,027,800	126,895	649,104	757,048	140,350	8.4	1.6	6.8
1972.....		100,472	510,735	611,207	9,023,507	126,857	654,474	754,946	140,312	8.4	1.6	6.8

TABLE LI.—(Male Teachers).

SHOWING THE ANNUAL CONTRIBUTIONS AND PENSION PAYMENTS AND THE PERCENTAGES THESE PAYMENTS ARE OF SALARIES.

Year.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
		Pensions to present pensioners.	Pensions to persons now in active service.	Pensions to entrants into service. Hypothesis I.	Grand total of all pensions (3)+(4).	Pensions to entrants into service. Hypothesis II.	Grand total of all pensions. Hypothesis II.	Contributions by present service.	Contributions by future service. Hypothesis I.	Total contributions. Hypothesis I. Cois. (8)+(9).	Contributions by future service. Hypothesis II.	Total contributions. Hypothesis II. Cois. (8)+(9).	Future salaries to present active service.	Salaries to future entrants.	Total salaries. Cois. (13)+(14).	Ratios of pension payments to salaries expressed in percentages. Cois. (7)+(15). Hypothesis II.	Percentage of salary contributed by teachers. Hypothesis II.	Percentages to be contributed by city and unprovided for. Hypothesis II.
1916....	\$8,368	\$2,508	\$2,508	.....	\$9,235	.....	\$9,235	\$13,758	\$142	\$13,900	\$117	\$13,875	\$1,555,623	\$42,602	\$1,598,225	0.6	0.9	—0.3
1917....	7,612	2,508	2,508	.....	10,120	.....	10,120	13,815	278	14,093	359	14,474	1,544,767	84,936	1,629,703	0.6	0.9	—0.3
1918....	6,899	4,146	4,146	.....	11,045	.....	11,045	13,822	409	14,231	612	14,843	1,533,591	126,841	1,660,432	0.7	0.9	—0.2
1919....	6,233	5,693	5,693	.....	11,926	.....	11,926	13,872	534	14,406	880	14,752	1,519,169	168,222	1,687,391	0.7	0.9	—0.2
1920....	5,618	7,408	7,408	.....	13,026	.....	13,026	13,870	655	14,525	1,162	15,032	1,505,929	209,257	1,715,186	0.8	0.9	—0.1
1921....	5,052	9,194	9,194	.....	14,246	.....	14,246	13,890	888	14,718	1,460	15,290	1,489,730	250,011	1,739,741	0.8	0.9	—0.1
1922....	4,532	10,901	10,901	.....	15,433	.....	15,433	13,780	1,113	14,893	1,780	15,660	1,471,247	290,507	1,761,754	0.9	0.9	—0.1
1923....	4,059	12,679	12,679	.....	16,738	.....	16,738	13,681	1,332	15,013	2,119	15,800	1,454,106	331,022	1,785,128	0.9	0.9	0.0
1924....	3,628	14,298	14,298	.....	17,926	.....	17,926	13,506	1,545	15,111	2,474	16,040	1,434,114	371,458	1,805,572	1.0	0.9	0.1
1925....	3,241	16,060	16,060	.....	19,301	.....	19,301	13,413	1,753	15,168	2,844	16,257	1,410,793	411,093	1,822,881	1.1	0.9	0.2
1926....	2,890	17,801	17,801	.....	20,691	.....	20,691	13,219	2,058	15,277	3,226	16,445	1,390,301	452,033	1,842,334	1.1	0.9	0.2
1927....	2,570	19,534	19,534	.....	22,104	.....	22,104	12,996	2,356	15,352	3,614	16,910	1,361,821	492,860	1,854,681	1.2	0.9	0.3
1928....	2,284	21,296	21,296	.....	23,580	.....	23,580	12,740	2,649	15,389	4,010	16,750	1,332,983	533,896	1,866,879	1.3	0.9	0.4
1929....	2,090	22,962	22,962	.....	24,982	.....	24,982	12,475	2,939	15,380	4,416	16,591	1,304,204	575,018	1,879,222	1.3	0.9	0.4
1930....	1,777	24,608	24,608	.....	26,385	.....	26,385	12,176	3,222	15,398	4,834	17,010	1,272,823	616,465	1,889,288	1.4	0.9	0.5
1931....	1,555	27,681	27,681	.....	27,719	.....	27,719	11,847	3,773	15,620	5,257	17,104	1,240,251	658,191	1,898,442	1.4	0.9	0.5
1932....	1,351	29,197	29,197	.....	29,032	.....	29,032	11,512	4,326	15,838	5,684	17,196	1,206,335	700,199	1,906,534	1.5	0.9	0.6
1933....	1,166	30,709	30,709	.....	30,363	.....	30,363	11,136	4,865	16,001	6,112	17,248	1,169,392	742,439	1,911,831	1.6	0.9	0.7
1934....	1,001	32,247	32,247	.....	31,719	.....	31,719	10,788	5,395	16,113	6,541	17,259	1,138,823	784,893	1,913,646	1.6	0.9	0.7
1935....	854	33,781	33,781	.....	33,101	.....	33,101	10,288	5,915	16,203	6,969	17,207	1,085,982	827,366	1,913,348	1.7	0.9	0.8
1936....	724	35,322	35,322	.....	34,576	.....	34,576	9,810	6,425	16,235	7,395	17,207	1,038,480	869,648	1,908,128	1.8	0.9	0.9
1937....	610	36,864	36,864	.....	36,094	.....	36,094	9,344	6,925	16,269	7,837	17,169	990,474	912,543	1,903,017	1.9	0.9	1.0
1938....	510	38,404	38,404	.....	37,374	.....	37,374	8,877	7,415	16,293	8,253	17,130	944,242	935,119	1,899,361	2.0	0.9	1.1
1939....	424	39,946	39,946	.....	38,746	.....	38,746	8,390	7,896	16,286	8,681	17,071	894,061	997,715	1,891,776	2.0	0.9	1.1
1940....	351	41,488	41,488	.....	40,116	.....	40,116	7,910	8,366	16,276	9,106	17,016	845,712	1,040,204	1,885,916	2.1	0.9	1.2
1941....	288	43,030	43,030	.....	41,452	.....	41,452	7,470	8,826	16,296	9,598	16,938	790,391	1,082,593	1,891,914	2.1	0.9	1.2
1942....	236	44,572	44,572	.....	42,788	.....	42,788	6,996	9,275	16,271	9,946	16,942	754,550	1,124,603	1,879,153	2.2	0.9	1.3

1913...	191	39,054	139	39,384	1,796	41,041	6,536	9,715	16,249	10,359	16,895	707,276	1,106,453	1,873,729	2,2	0.9	1.3
1914...	154	38,892	317	39,393	2,253	41,299	6,113	10,140	16,253	10,767	16,890	694,845	1,247,853	1,872,098	2,2	0.9	1.3
1915...	122	38,506	573	39,291	2,776	41,494	5,690	10,555	16,215	11,168	16,828	617,084	1,205,860	1,865,944	2,2	0.9	1.3
1916...	94	38,093	909	39,096	3,367	41,554	5,224	10,957	16,161	11,561	16,785	571,938	1,299,280	1,861,218	2,2	0.9	1.3
1917...	72	37,593	1,327	38,994	4,029	41,606	4,822	11,345	16,167	11,944	16,766	530,572	1,399,029	1,859,601	2,2	0.9	1.3
1918...	55	38,755	1,899	38,639	4,764	41,606	4,822	11,345	16,167	11,944	16,766	483,406	1,397,991	1,854,297	2,2	0.9	1.3
1919...	42	36,017	2,414	38,473	5,571	41,630	4,400	12,079	16,112	12,315	16,715	444,727	1,405,708	1,850,435	2,2	0.9	1.3
1920...	30	34,949	3,062	38,061	6,449	41,498	3,651	12,418	16,069	13,013	16,681	408,012	1,442,380	1,850,332	2,2	0.9	1.3
1921...	19	34,025	3,830	37,874	7,397	41,441	3,281	12,742	16,093	13,337	16,018	398,464	1,477,580	1,846,409	2,2	0.9	1.3
1922...	12	32,979	4,638	37,649	8,414	41,405	2,850	13,047	15,967	13,642	16,362	350,891	1,511,561	1,842,232	2,2	0.9	1.3
1923...	7	31,780	5,563	37,350	9,497	41,284	2,532	13,333	15,865	13,928	16,480	297,187	1,543,940	1,840,726	2,2	0.9	1.3
1924...	3	30,539	6,543	37,085	10,645	41,187	2,291	13,599	15,800	14,194	16,485	261,519	1,573,549	1,835,459	2,2	0.9	1.3
1925...	1	29,288	7,596	36,865	11,855	41,144	1,936	13,845	15,841	14,440	16,436	228,989	1,602,461	1,831,453	2,2	0.9	1.3
1926...		27,892	8,717	36,599	13,123	41,005	1,746	14,071	15,817	14,666	16,412	201,859	1,638,962	1,830,841	2,2	0.9	1.3
1927...		26,205	9,908	36,303	14,451	40,746	1,522	14,274	15,796	14,870	16,371	173,450	1,653,250	1,826,700	2,2	0.9	1.3
1928...		24,753	11,174	35,927	15,844	40,597	1,322	14,453	15,775	15,049	16,371	147,801	1,674,869	1,822,670	2,2	0.9	1.3
1929...		22,953	12,542	35,495	17,329	40,292	1,074	14,604	15,608	15,318	16,292	126,745	1,693,308	1,820,553	2,2	0.9	1.3
1930...		21,488	14,045	35,533	18,939	40,292	884	14,722	15,606	15,318	16,292	104,952	1,707,991	1,812,943	2,2	0.9	1.3
1931...		19,846	15,717	35,563	20,708	40,554	719	14,806	15,595	15,402	16,121	85,776	1,718,607	1,804,383	2,2	0.9	1.3
1932...		18,149	17,562	35,711	22,632	40,791	590	14,858	15,448	15,454	16,044	70,839	1,735,293	1,796,072	2,2	0.9	1.4
1933...		16,672	19,548	36,220	24,708	41,380	460	14,878	15,338	15,474	15,834	55,662	1,727,875	1,783,557	2,2	0.9	1.4
1934...		15,112	21,636	36,770	26,890	42,001	390	14,880	15,270	15,476	15,806	42,869	1,728,168	1,771,037	2,2	0.9	1.5
1935...		13,413	23,725	37,138	29,020	42,433	274	14,880	15,154	15,476	15,750	33,642	1,728,168	1,761,810	2,2	0.9	1.5
1936...		11,969	25,534	37,503	30,885	42,854	197	14,880	15,077	15,476	15,673	24,383	1,728,168	1,742,551	2,2	0.9	1.5
1937...		10,610	27,098	37,708	32,496	43,106	135	14,880	15,015	15,476	15,611	16,823	1,728,168	1,744,991	2,2	0.9	1.6
1938...		9,156	28,428	37,584	33,896	43,022	94	14,880	14,974	15,476	15,570	11,861	1,728,168	1,740,029	2,2	0.9	1.6
1939...		7,893	29,539	37,435	35,011	42,907	58	14,880	14,938	15,476	15,534	7,403	1,728,168	1,735,571	2,2	0.9	1.6
1940...		6,725	30,447	37,172	36,947	42,679	23	14,880	14,903	15,476	15,499	2,951	1,728,168	1,731,119	2,2	0.9	1.6
1941...		5,692	31,172	36,834	38,094	42,356	3	14,880	14,883	15,476	15,479	327	1,728,168	1,728,495	2,2	0.9	1.5
1942...		4,637	31,724	36,371	37,273	41,910		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.5
1943...		3,681	32,154	35,835	37,706	41,387		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.5
1944...		2,877	32,455	35,332	38,016	40,893		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.5
1945...		2,106	32,660	34,766	38,227	40,333		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1946...		1,595	32,782	34,367	38,363	39,698		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1947...		1,187	32,870	34,057	38,444	39,631		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1948...		860	32,913	33,773	38,488	39,348		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1949...		605	32,934	33,539	38,509	39,114		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1950...		411	32,943	33,354	38,518	38,929		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.4
1951...		267	32,946	33,213	38,521	38,768		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1952...		165	32,947	33,112	38,522	38,687		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1953...		95	32,947	33,042	38,522	38,617		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1954...		50	32,947	32,997	38,522	38,579		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1955...		24	32,947	32,971	38,522	38,546		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1956...		10	32,947	32,957	38,522	38,532		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1957...		4	32,947	32,951	38,522	38,526		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
1958...		1	32,947	32,948	38,522	38,523		14,880	14,880	15,476	15,476		1,728,168	1,728,168	2,2	0.9	1.3
Totals.	\$76,655	\$1,532,134	\$922,658	\$2,331,447	\$1,143,598	\$2,552,337	\$378,213	\$745,431	\$1,123,644	\$736,879	\$1,175,092	\$40,704,163	\$90,552,637	\$131,256,800	.....	.....	.....

¹ The sign — Indicates that pension payments are less than teachers' contributions.

TABLE LII—(Teachers, Male and Female).
 SHOWING THE TOTAL ANNUAL CONTRIBUTIONS, PENSION PAYMENTS,
 AND PERCENTAGES THESE PAYMENTS ARE OF SALARIES FOR
 MALES AND FEMALES TAKEN TOGETHER.

Year.	Grand totals of all pension payments under Hypothesis II.	Grand totals of all contributions under Hypothesis II.	Grand totals of salaries.	Ratios of pension payments to salaries expressed in percentages.	Average percentages of salaries contributed by teachers.	Average percentages of salaries to be provided by the city or provided for.
1916.....	\$205,424	\$148,252	\$10,467,382	2.0	1.4	0.6
1917.....	223,835	150,488	10,604,647	2.1	1.4	0.7
1918.....	243,133	152,734	10,744,258	2.3	1.4	0.9
1919.....	263,407	154,908	10,861,175	2.4	1.4	1.0
1920.....	285,062	157,049	10,966,094	2.6	1.4	1.2
1921.....	307,540	158,978	11,069,630	2.8	1.4	1.4
1922.....	331,078	160,432	11,153,319	3.0	1.4	1.6
1923.....	355,852	161,801	11,235,726	3.2	1.4	1.8
1924.....	380,912	163,067	11,310,923	3.4	1.4	2.0
1925.....	407,521	164,080	11,362,118	3.6	1.4	2.2
1926.....	434,241	165,025	11,423,557	3.8	1.4	2.4
1927.....	460,616	165,836	11,465,560	4.0	1.4	2.6
1928.....	487,879	166,485	11,496,268	4.2	1.4	2.8
1929.....	515,106	167,110	11,524,177	4.5	1.5	3.0
1930.....	542,067	167,635	11,542,436	4.7	1.5	3.2
1931.....	568,537	167,994	11,548,334	4.9	1.5	3.4
1932.....	594,509	168,312	11,553,383	5.1	1.5	3.6
1933.....	620,002	168,346	11,549,432	5.4	1.5	3.9
1934.....	644,165	168,288	11,535,075	5.6	1.5	4.1
1935.....	668,421	167,993	11,517,045	5.8	1.5	4.3
1936.....	691,699	167,518	11,489,183	6.0	1.5	4.5
1937.....	713,438	167,031	11,459,818	6.2	1.5	4.7
1938.....	733,867	166,459	11,419,740	6.4	1.5	4.9
1939.....	751,942	165,838	11,392,226	6.6	1.5	5.1
1940.....	768,074	165,332	11,361,155	6.8	1.5	5.3
1941.....	782,597	164,771	11,327,839	6.9	1.5	5.4
1942.....	793,679	164,181	11,301,530	7.0	1.5	5.5
1943.....	804,838	163,759	11,266,650	7.1	1.5	5.6
1944.....	813,231	163,281	11,243,761	7.2	1.5	5.7
1945.....	819,745	162,830	11,217,915	7.3	1.5	5.8
1946.....	823,702	162,411	11,189,494	7.4	1.5	5.9
1947.....	826,762	162,071	11,170,781	7.4	1.5	5.9
1948.....	827,636	161,714	11,146,196	7.4	1.5	5.9
1949.....	828,222	161,339	11,123,431	7.4	1.5	5.9
1950.....	825,987	161,126	11,103,530	7.4	1.5	5.9
1951.....	825,071	160,961	11,087,936	7.4	1.5	5.9
1952.....	822,378	160,648	11,072,305	7.4	1.5	5.9
1953.....	818,885	160,347	11,058,576	7.4	1.5	5.9
1954.....	815,322	160,175	11,044,700	7.4	1.5	5.9
1955.....	811,617	159,979	11,030,764	7.4	1.5	5.9
1956.....	807,874	159,810	11,021,747	7.3	1.5	5.8
1957.....	804,354	159,700	11,012,453	7.3	1.5	5.8
1958.....	801,508	159,422	10,999,494	7.3	1.4	5.9
1959.....	793,085	159,124	10,989,396	7.3	1.4	5.9
1960.....	797,830	158,826	10,973,454	7.3	1.4	5.9
1961.....	797,414	158,487	10,954,684	7.3	1.4	5.9
1962.....	797,832	158,133	10,933,956	7.3	1.4	5.9
1963.....	799,135	157,727	10,906,551	7.3	1.4	5.9
1964.....	800,722	157,368	10,880,389	7.4	1.4	6.0
1965.....	802,081	156,985	10,857,208	7.4	1.4	6.0
1966.....	803,195	156,689	10,833,442	7.4	1.4	6.0
1967.....	803,762	156,505	10,813,389	7.4	1.4	6.0
1968.....	803,493	156,202	10,795,604	7.4	1.4	6.0
1969.....	802,755	156,074	10,779,788	7.4	1.4	6.0
1970.....	801,365	155,918	10,765,961	7.4	1.4	6.0
1971.....	799,404	155,829	10,756,295	7.4	1.4	6.0
1972.....	796,856	155,788	10,751,675	7.4	1.4	6.0
1973.....	793,907	155,768	10,749,331	7.4	1.4	6.0
1974.....	790,771	155,758	10,748,279	7.4	1.4	6.0
1975.....	786,376	155,755	10,747,931	7.3	1.4	5.9
1976.....	784,103	155,755	10,747,850	7.3	1.4	5.9
1977.....	780,865	155,755	10,747,850	7.3	1.4	5.9
1978.....	777,729	155,755	10,747,850	7.2	1.4	5.8
1979.....	774,744	155,755	10,747,850	7.2	1.4	5.8
1980.....	771,988	155,755	10,747,850	7.2	1.4	5.8
1981.....	769,490	155,755	10,747,850	7.2	1.4	5.8
1982.....	767,024	155,755	10,747,850	7.1	1.4	5.7
1983.....	765,338	155,755	10,747,850	7.1	1.4	5.7
1984.....	763,738	155,755	10,747,850	7.1	1.4	5.7

TABLE LII—Concluded.

Year.	Grand totals of all pension payments under Hypothesis II.	Grand totals of all contributions under Hypothesis II.	Grand totals of salaries.	Ratios of pension payments to salary payments expressed in per centages.	Average percentages of salaries contributed by teachers.	Average percentages of salaries to be provided by the city or unprovided for.
1985.....	\$762,385	\$155,755	\$10,747,850	7.1	1.4	5.7
1986.....	761,351	155,755	10,747,850	7.1	1.4	5.7
1987.....	760,550	155,755	10,747,850	7.1	1.4	5.7
1988.....	759,908	155,755	10,747,850	7.1	1.4	5.7
1989.....	759,511	155,755	10,747,850	7.1	1.4	5.7
1990.....	759,210	155,755	10,747,850	7.1	1.4	5.7
1991.....	759,013	155,755	10,747,850	7.1	1.4	5.7
1992.....	758,877	155,755	10,747,850	7.1	1.4	5.7
1993.....	758,796	155,755	10,747,850	7.1	1.4	5.7
1994.....	758,750	155,755	10,747,850	7.1	1.4	5.7
1995.....	758,725	155,755	10,747,850	7.1	1.4	5.7
1996.....	758,716	155,755	10,747,850	7.1	1.4	5.7
1997.....	758,712	155,755	10,747,850	7.0	1.4	5.6
Totals.....	\$57,257,241	\$13,079,042	\$903,169,916			

TABLE LIII—(Teachers, Male and Female).
BALANCE SHEET SHOWING STATUS OF FUND AS OF JANUARY 1, 1916.

Liabilities.			Assets.				
	Total amount of payments to be made.	Present value of payments to be received at 4 per cent.	Difference due to interest.		Total payments to be received on hand.	Present value of payments to be received on hand. Interest 4 per cent.	Difference due to interest.
Pensions to 467 female pensioners on service pension roll...	\$2,897,978	\$1,932,914	\$965,064	Employees' contributions—			
Pensions to 54 female pensioners on disability pension roll...	259,313	169,820	89,493	Women	\$2,999,157	\$1,860,444	\$1,138,713
Pensions to 23 male pensioners on pension roll.....	76,655	58,930	17,725	Men.....	378,213	221,491	156,722
Total pensions entered upon	\$3,233,946	\$2,161,664	\$1,072,282	An amount equal to that contributed by employees to be provided by the Board of Education.....	{ 2,999,157 378,213 1,030,572	1,860,444 221,491 1,030,572	1,138,713 156,722
Pensions to present female teachers of active service retiring on service pensions	\$22,319,894	\$7,723,768	\$14,596,126	Cash on hand Jan. 1, 1916....			
Pensions to present female teachers of active service retiring on disability pensions.....	1,031,966	425,951	606,015	To be otherwise provided than from employees contributions and contributions of the Board of Education equal to that of employees, or a deficiency			
Pensions to present male teachers of active service.....	1,332,134	477,769	854,365				
Refunds	8,000	6,489	1,511				
Total pensions not entered upon.....	\$24,691,994	\$8,633,977	\$16,058,017		20,140,638	5,601,199	14,539,429
Grand totals	\$27,925,940	\$10,795,641	\$17,130,299		\$27,925,940	\$10,795,641	\$17,130,299

THE MUNICIPAL EMPLOYEES' FUND OF CHICAGO

THE BENEFITS.

Service Pensions: Pensions of \$600 per year are granted to those who choose to retire from service after 20 years of service, but if the employee at that time is under 55 years of age, the payment of a pension does not begin until he or she attains the age of 55 years. Civil War veterans who have attained the age of 65 years are required to serve only 10 years.

Disability Pensions: Pensions are granted to those who retire from service after 5 years of service on account of disability.

THE SOURCES OF REVENUE.

Each employee contributes \$2 per month deducted from salary. If an employee has not contributed a total of \$480 at the time of retirement on pension, he must contribute the balance at that time, or have deductions made from his pension.

The city appropriates for two years, under the amendment of July 1, 1915, an amount equal to the sum deducted from the salaries of employees during the previous calendar year.

THE PLAN ADOPTED IN INVESTIGATING THIS FUND.

Prior to July 1, 1911, the date when the act regulating this fund took effect, there were no means of obtaining any data regarding the rates of withdrawal from service, of value in an investigation of future costs under this fund; consequently we began the accumulation of data as of July 1, 1911. At the same time, it was deemed advisable not to extend the period beyond January 1, 1916, and therefore the rates were derived in this case from an experience of four and one-half years as against ten years in the case of the three preceding funds. However, because of the number of employees involved, we believe that the rates thus found will reflect future experience with considerable accuracy.

Since no pensions had been paid from this fund on January 1, 1916, no experience was available from which to obtain rates of retirement on pension as of that date. Payments were begun on July 1; but even if our investigation had been delayed so as to include a few months of pension experience, the rates for retirement on pension for these few months might in no wise be indicative of those that would be experienced in the future. Consequently we were driven to make assumptions with regard to the ages when employees who had fulfilled the requirements regarding years of service would accept pension. We assumed that all who had 20 years of service to their credit would accept pension: first, at age 55; second, at age 60; third, at age 65; and fourth, at age 70. Under each of these assumptions we made a calculation to determine the cost of pensions under the withdrawal experi-

ence derived from an investigation of the fund from July 1, 1911, to January 1, 1916.

As the first and last of these assumptions are of an extreme character, it may be assumed with safety that the future experience of this fund will exhibit costs somewhere between those found in these two cases.

ACTUAL EXPERIENCE TABLE AND TABLE OF RATES.

The actual experience table is given in outline in Table LIV, below; the table giving the rates of withdrawal from service and rates of death in service is Table LV, below.

For rates of mortality among pensioners we adopted the American Experience Table of Mortality.

Because of the absence of data we were compelled to disregard almost entirely the disability feature. We assumed that all over 70 years of age with insufficient service to retire on service pensions will retire on disability pensions. This probably gives costs lower than will actually be experienced among disability pensioners, but the item is relatively unimportant.

TABLE LIV—(Municipal Employees).

ACTUAL EXPERIENCE WITH THOSE WHO HAVE BEEN IN ACTIVE SERVICE WITHIN THE PERIOD OF JULY 1, 1911 AND JANUARY 1, 1916.

Age.	(2) Survivors of July 1, 1911, on active list Jan. 1, 1916, with ages as of Jan. 1, 1916.	(3) Survivors of July 1, 1911, not on active list Jan. 1, 1916, with ages at separation.	(4) Entrants still on active list with ages at entrance.	(5) Entrants withdrawn from active service before Jan. 1, 1916, with ages at entrance.	(6) Withdrawals by resignation or dismissal, with ages at withdrawal.	(7) Deaths with ages at death.	(8) Withdrawals by abolition of position, with ages at withdrawal.	(9) Total decrements, Cols. (6) + (7) + (8).	(10) Existing Jan. 1, 1916, on active list, with ages as of Jan. 1, 1916.
20.....		1							
21.....		1	9	5	4			4	8
22.....		2	21	2	3			3	28
23.....	4	3	61	8	8			8	65
24.....	15	3	67	11	13	1		14	82
Etc.....		Details	for	each	age.				
Totals.	3,526	793	2,078	310	739	317	47	1,103	5,604

TABLE LV—(Municipal Employees).

Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in the active service.	Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in the active service.
20....	0.0366	0.0015	36...	0.0420	0.0082
21....	0.0379	0.0017	37...	0.0404	0.0088
22....	0.0395	0.0020	38...	0.0388	0.0093
23....	0.0420	0.0023	39...	0.0372	0.0098
24....	0.0466	0.0026	40...	0.0356	0.0103
25....	0.0553	0.0029	41...	0.0340	0.0108
26....	0.0583	0.0033	42...	0.0319	0.0113
27....	0.0586	0.0037	43...	0.0296	0.0118
28....	0.0573	0.0042	44...	0.0272	0.0124
29....	0.0546	0.0047	45...	0.0250	0.0130
30....	0.0521	0.0052	46...	0.0227	0.0136
31....	0.0501	0.0057	47...	0.0204	0.0142
32....	0.0483	0.0062	48...	0.0180	0.0149
33....	0.0468	0.0067	49...	0.0163	0.0157
34....	0.0452	0.0072	50...	0.0154	0.0165
35....	0.0436	0.0077	51...	0.0149	0.0173

TABLE LV—Concluded.

Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in the active service.	Age.	Rates of withdrawal by resignation or dismissal.	Rates of mortality in the active service.
52....	0.0145	0.0183	63...	0.0140	0.0340
53....	0.0143	0.0194	64...	0.0140	0.0363
54....	0.0142	0.0205	65...	0.0137	0.0392
55....	0.0141	0.0216	66...	0.0129	0.0424
56....	0.0140	0.0228	67...	0.0115	0.0457
57....	0.0140	0.0242	68...	0.0092	0.0490
58....	0.0140	0.0256	69...	0.0045	0.0524
59....	0.0140	0.0269	70...	.....	0.0558
60....	0.0140	0.0286	71...	.....	0.0592
61....	0.0140	0.0303	72...	.....	0.0628
62....	0.0140	0.0321			

The probability of losing a position on account of abolition of position based on the data from July 1, 1911, to June 1, 1916, is 0.0021.

TABLE LVI—(Municipal Employees).
ACTIVE SERVICE TABLE AND SALARY SCALE.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age.	Active service.	Withdrawals.	Deaths.	Losing position by abolition of position.	Total decrements. Cols. (3)+ (4)+(5).	Salary scale from active service Jan. 1, 1916.
20.....	100,000	3,660	150	206	4,016	.....
21.....	95,984	3,638	163	198	3,999	\$ 635
22.....	91,985	3,633	184	189	4,006	815
23.....	87,979	3,695	202	181	4,078	930
24.....	83,901	3,910	218	173	4,301	1,020
25.....	79,800	4,402	231	164	4,797	1,070
26.....	74,803	4,561	247	154	4,762	1,110
27.....	70,041	4,104	259	144	4,507	1,145
28.....	65,534	3,755	275	135	4,165	1,170
29.....	61,369	3,351	288	126	3,765	1,200
30.....	57,604	3,001	300	119	3,420	1,230
31.....	54,184	2,715	309	112	3,136	1,255
32.....	51,048	2,466	316	105	2,887	1,285
33.....	48,161	2,254	323	99	2,676	1,310
34.....	45,485	2,056	327	94	2,477	1,330
35.....	43,008	1,875	331	89	2,295	1,345
36.....	40,713	1,710	334	84	2,128	1,350
37.....	38,585	1,559	340	79	1,978	1,355
38.....	36,607	1,420	340	75	1,835	1,360
39.....	34,772	1,294	341	72	1,707	1,362
40.....	33,065	1,177	341	68	1,586	1,362
41.....	31,479	1,070	340	65	1,475	1,362
42.....	30,004	957	339	62	1,358	1,362
43.....	28,646	848	338	59	1,245	1,362
44.....	27,401	745	340	56	1,141	1,362
45.....	26,260	657	341	54	1,052	1,361
46.....	25,208	572	343	52	967	1,360
47.....	24,241	495	344	50	889	1,359
48.....	23,352	420	348	48	816	1,359
49.....	22,536	367	354	46	767	1,358
50.....	21,769	335	359	45	739	1,357
51.....	21,030	313	364	43	720	1,356
52.....	20,310	294	372	42	708	1,355
53.....	19,602	280	380	40	700	1,354
54.....	18,902	268	387	39	694	1,353
55.....	18,208	257	393	38	688	1,352
56.....	17,520	245	399	36	680	1,351
57.....	16,840	236	408	35	679	1,350
58.....	16,161	226	414	33	673	1,348
59.....	15,488	217	417	32	666	1,347
60.....	14,822	208	424	31	663	1,344
61.....	14,159	198	429	29	656	1,335
62.....	13,503	189	433	28	650	1,330
63.....	12,853	180	437	26	643	1,325
64.....	12,210	171	443	25	639	1,320
65.....	11,571	159	454	24	637	1,315
66.....	10,934	141	464	23	628	1,308
67.....	10,306	119	471	21	611	1,300
68.....	9,695	89	475	20	584	1,296
69.....	9,111	41	477	19	537	1,295
70.....	8,574	.....	.....	.....	.....	.....

ASSUMPTIONS WITH REGARD TO AGES OF RETIREMENT.

In the interest of clearness, let us explain in more detail what we assume in regard to ages of retirement. Under our most expensive assumption about retirement, we assume that those who have 20 years of service at age 55 will retire at that age. If they have insufficient service to retire at 55, they must wait for retirement until age 60. Then they are assumed to retire if eligible. If they are ineligible at 60, they must wait to retire until age 65. If they are ineligible at 65, they can not retire before age 70. After age 70, we assume that, if they have not the service requirements, they will retire on disability pensions.

THE PRESENT ACTIVE SERVICE AND FUTURE SERVICE.

It seems to tend towards clear thinking-in considering a proposed pension system to separate the future entrants to the service from those who constitute the present active service. It is, in fact, the mixture of these two subgroups that leads to many of the blunders in starting a pension system.

There is generally a large accrued liability chargeable to the active service because the members of such active service have not been providing the necessary contributions during their entire service. Adequate contributions from members of the future service entering at

TABLE LVII—(Municipal Employees).
SHOWING FOR FUTURE ENTRANTS, WITH RESPECT TO AGES AT ENTRANCE INTO THE SERVICE, THE RATIO OF BENEFITS WHICH THE CONTRIBUTIONS OF EMPLOYEES WILL PRODUCE, TO TOTAL BENEFITS.

WITHDRAWAL RATES FROM EXPERIENCE FROM JULY 1, 1911, TO JUNE 1, 1916.

Age at entrance.	Ratios of benefits purchased by contributions of employees to total benefits.			
	On the assumption of retirement at 55 years of age.	On the assumption of retirement at 60 years of age.	On the assumption of retirement at 65 years of age.	On the assumption of retirement at 70 years of age.
20.....	0.632	0.987	1.47	2.06
21.....	0.584	0.923	1.41	2.01
22.....	0.535	0.858	1.34	1.92
23.....	0.497	0.797	1.26	1.86
24.....	0.454	0.741	1.18	1.78
25.....	0.415	0.684	1.12	1.71
26.....	0.379	0.634	1.04	1.62
27.....	0.346	0.583	0.983	1.56
28.....	0.317	0.539	0.918	1.48
29.....	0.288	0.495	0.857	1.41
30.....	0.262	0.457	0.796	1.35
31.....	0.239	0.418	0.743	1.27
32.....	0.216	0.385	0.690	1.21
33.....	0.191	0.353	0.640	1.13
34.....	0.178	0.323	0.593	1.07
35.....	0.161	0.296	0.549	1.00
36.....	.....	0.271	0.509	0.941
37.....	.....	0.247	0.468	0.880
38.....	.....	0.225	0.432	0.819
39.....	.....	0.206	0.397	0.766
40.....	.....	0.186	0.366	0.716
41.....	.....	.....	0.336	0.670
42.....	.....	.....	0.308	0.622
43.....	.....	.....	0.283	0.574
44.....	.....	.....	0.258	0.531
45.....	.....	.....	0.236	0.492
46.....	.....	.....	.....	0.454
47.....	.....	.....	.....	0.416
48.....	.....	.....	.....	0.384
49.....	.....	.....	.....	0.351
50.....	.....	.....	.....	0.321

TABLE LVIII—(Municipal Employees).

PRESENT VALUES OF FUTURE CONTRIBUTIONS AND BENEFITS PER PARTICIPANT ON ASSUMPTION OF RETIREMENT AT AGE 55, IF ELIGIBLE AT THAT AGE.

Age.	Present value of future contributions.	Benefits to all participants.			Additional benefits to those who contributed each month from July 1, 1911 to June 1, 1916.		Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.	Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
20.....	\$239	\$ 313	\$60	\$5	\$28	\$2	\$15
21.....	235	339	58	5	28	2	15
22.....	231	368	59	5	28	2	15
23.....	228	400	54	5	28	2	15
24.....	224	436	52	5	28	2	15
25.....	222	478	51	5	28	2	15
26.....	221	529	49	4	28	2	15
27.....	222	588	48	4	27	2	14
28.....	223	654	46	4	27	2	14
29.....	223	726	45	4	26	2	14
30.....	223	804	43	4	25	2	13
31.....	223	889	42	4	25	2	13
32.....	222	982	40	4	24	2	13
33.....	221	1,082	39	4	23	2	12
34.....	219	1,192	36	4	23	2	12
35.....	217	1,311	34	4	22	2	12
36.....	215	1,440	33	4	21	2	12
37.....	211	1,580	31	3	21	2	12
38.....	208	1,733	28	3	20	2	11
39.....	204	1,897	26	3	19	2	11
40.....	199	2,074	24	3	18	2	10
41.....	193	2,266	22	3	17	2	9
42.....	187	2,473	20	2	16	2	9
43.....	179	2,693	18	2	15	2	8
44.....	171	2,928	16	2	14	2	8
45.....	161	3,178	14	2	13	2	8
46.....	151	3,443	12	1	12	1	6
47.....	139	3,723	10	1	11	1	6
48.....	126	3,999	8	1	10	1	5
49.....	112	4,331	6	1	9	1	5
50.....	96	4,664	5	1	7	1	4
51.....	80	5,021	3	0	6	1	3
52.....	62	5,407	2	0	5	0	3
53.....	43	5,825	1	0	3	0	1
54.....	22	6,281	0	0	2	0	1
55.....		6,783					
56.....		6,589					
57.....		6,392					
58.....		6,193					
59.....		5,991					
60.....		5,789					
61.....		5,585					
62.....		5,381					
63.....		5,178					
64.....		4,974					
65.....		4,771					
66.....		4,570					
67.....		4,369					
68.....		4,171					
69.....		3,976					
70.....		3,784					
71.....		3,596					
72.....		3,411					
73.....		3,229					
74.....		3,052					
75.....		2,876					
76.....		2,703					
77.....		2,531					
78.....		2,362					
79.....		2,194					
80.....		2,028					
81.....		1,865					
82.....		1,705					
83.....		1,548					
84.....		1,391					

TABLE LIX—(Municipal Employees).

PRESENT VALUES OF CONTRIBUTIONS AND BENEFITS PER PARTICIPANT ON ASSUMPTION OF RETIREMENT AT AGE 60, IF ELIGIBLE.

(1)	(2)	(3)			(4)		(5)
Age.	Present value of future contributions.	Benefits to all participants.			Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.	Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00, upon abolition of position.	
20.....	\$244	\$ 179	\$63	\$5	\$28	\$2	\$15
21.....	240	194	61	5	28	2	15
22.....	236	210	60	5	28	2	15
23.....	233	229	58	5	29	2	16
24.....	230	249	56	5	29	2	16
25.....	228	273	55	5	29	2	16
26.....	229	302	54	5	28	2	15
27.....	230	336	53	5	28	2	15
28.....	232	373	52	5	27	2	14
29.....	233	414	51	5	27	2	14
30.....	235	459	50	5	26	2	14
31.....	235	508	48	5	26	2	14
32.....	236	560	47	5	25	2	14
33.....	236	618	46	5	25	2	14
34.....	236	680	44	5	24	2	13
35.....	236	748	43	5	24	2	13
36.....	235	822	41	4	23	2	12
37.....	234	902	40	4	22	2	12
38.....	232	989	38	4	22	2	12
39.....	230	1,083	36	4	21	2	12
40.....	228	1,184	34	4	20	2	11
41.....	225	1,294	33	4	20	2	11
42.....	221	1,412	31	4	19	2	10
43.....	217	1,537	29	3	18	2	10
44.....	212	1,672	27	3	18	2	10
45.....	206	1,815	25	3	17	2	10
46.....	199	1,966	23	3	16	2	9
47.....	191	2,126	21	2	15	2	8
48.....	182	2,284	19	2	15	2	8
49.....	173	2,473	17	2	14	2	8
50.....	162	2,663	15	2	13	2	8
51.....	150	2,867	13	1	12	1	6
52.....	138	3,087	11	1	12	1	6
53.....	125	3,326	9	1	11	1	6
54.....	110	3,587	7	1	10	1	6
55.....	95	3,873	5	1	8	1	4
56.....	79	4,187	4	0	7	1	4
57.....	61	4,529	2	0	6	1	4
58.....	42	4,907	1	0	4	0	2
59.....	22	5,327	0	0	2	0	1
60.....		5,789					
61.....		5,585					
62.....		5,381					
63.....		5,178					
64.....		4,974					
65.....		4,771					
66.....		4,570					
67.....		4,369					
68.....		4,171					
69.....		3,976					
70.....		3,784					
71.....		3,596					
72.....		3,411					
73.....		3,229					
74.....		3,052					
75.....		2,876					
76.....		2,703					
77.....		2,531					
78.....		2,362					
79.....		2,194					
80.....		2,028					

TABLE LIX—Concluded.

(1)	(2)	(3)			(4)		(5)
Age.	Present value of future contributions.	Benefits to all participants.			Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.	Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
81.....		\$1,865					
82.....		1,705					
83.....		1,548					
84.....		1,391					

TABLE LX—(Municipal Employees).

PRESENT VALUES OF CONTRIBUTIONS AND BENEFITS PER PARTICIPANT ON ASSUMPTION OF RETIREMENT AT AGE 65, IF ELIGIBLE.

(1)	(2)	(3)			(4)		(5)
Age.	Present value of future contributions.	Benefits to all participants.			Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.	Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
20.....	\$247	\$ 94	\$68	\$5	\$28	\$2	\$15
21.....	243	102	65	5	29	2	16
22.....	240	111	63	5	29	2	16
23.....	237	121	62	5	29	2	16
24.....	234	132	60	5	29	2	16
25.....	233	144	59	5	29	2	16
26.....	234	160	58	5	29	2	16
27.....	236	177	58	5	28	2	15
28.....	238	197	57	5	28	2	15
29.....	240	219	56	5	28	2	15
30.....	242	243	56	5	27	2	14
31.....	244	268	55	5	27	2	14
32.....	245	296	54	5	26	2	14
33.....	246	326	53	5	26	2	14
34.....	247	359	52	5	25	2	14
35.....	248	395	51	5	25	2	14
36.....	249	434	50	5	24	2	13
37.....	249	477	49	5	24	2	13
38.....	249	523	48	5	24	2	13
39.....	248	572	47	5	23	2	12
40.....	248	626	45	5	23	2	12
41.....	246	683	44	5	22	2	12
42.....	245	746	43	5	22	2	12
43.....	243	812	41	4	21	2	12
44.....	240	883	40	4	21	2	12
45.....	237	959	38	4	20	2	11
46.....	232	1,039	36	4	20	2	11
47.....	227	1,123	35	4	19	2	10
48.....	220	1,207	33	3	19	2	10
49.....	214	1,307	31	3	18	2	10
50.....	207	1,407	29	3	18	2	10

TABLE LX—Concluded.

(1) Age.	(2) Present value of future contributions.	(3) Benefits to all participants.				(4) Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		(5) Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.		Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
51.....	\$198	\$1,514	\$27	\$3		\$18	\$2	\$10
52.....	190	1,631	25	2		17	2	10
53.....	180	1,757	22	2		17	2	10
54.....	171	1,895	20	2		16	2	9
55.....	160	2,046	18	2		15	2	8
56.....	149	2,212	15	1		15	1	8
57.....	137	2,393	13	1		14	1	8
58.....	125	2,593	11	1		12	1	6
59.....	111	2,815	9	1		12	1	6
60.....	93	2,942	6	1		10	1	6
61.....	77	3,201	5	0		9	1	5
62.....	60	3,492	3	0		7	1	4
63.....	41	3,814	2	0		5	0	3
64.....	21	4,176	1	0		3	0	2
65.....		4,771						
66.....		4,570						
67.....		4,369						
68.....		4,171						
69.....		3,976						
70.....		3,784						
71.....		3,596						
72.....		3,411						
73.....		3,229						
74.....		3,052						
75.....		2,876						
76.....		2,703						
77.....		2,531						
78.....		2,362						
79.....		2,194						
80.....		2,028						
81.....		1,865						
82.....		1,705						
83.....		1,548						
84.....		1,391						

TABLE LXI.—(Municipal Employees).

PRESENT VALUES OF CONTRIBUTIONS AND BENEFITS PER PARTICIPANT ON THE ASSUMPTION OF RETIREMENT AT AGE 70, IF ELIGIBLE

(1) Age.	(2) Present value of future contributions.	(3) Benefits to all participants.				(4) Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		(5) Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.		Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
20.....	\$248	\$46	\$68	\$6		\$29	\$2	\$16
21.....	245	49	67	6		29	2	16
22.....	242	54	66	6		29	2	16
23.....	239	58	64	6		29	2	16

TABLE LXI—Concluded.

(1)	(2)	(3)			(4)		(5)
Age.	Present value of future contributions.	Benefits to all participants.			Additional benefits to those who contributed each month from July 1, 1911, to June 1, 1916.		Additional benefits to those who contributed part of the time from July 1, 1911, to June 1, 1916, because of returning contributions.
		Present value of pension benefit.	Present value of return of one-half of future contributions in case of death or withdrawal.	Present value of return of total of future contributions in case position is abolished.	Present value of \$54.00 upon death or withdrawal.	Present value of \$108.00 upon abolition of position.	
24.....	\$237	\$ 64	\$63	\$6	\$29	\$2	\$16
25.....	236	70	62	6	29	2	16
26.....	237	77	62	6	29	2	16
27.....	239	86	61	6	29	2	16
28.....	241	95	61	6	29	2	16
29.....	244	106	61	6	28	2	15
30.....	247	117	60	6	28	2	15
31.....	249	130	60	6	27	2	14
32.....	251	143	59	6	27	2	14
33.....	252	158	59	6	27	2	14
34.....	254	174	58	6	26	2	14
35.....	256	191	58	6	26	2	14
36.....	257	210	57	6	26	2	14
37.....	258	230	57	6	25	2	14
38.....	258	253	56	6	25	2	14
39.....	259	277	55	6	24	2	13
40.....	260	303	54	6	24	2	13
41.....	260	330	53	5	24	2	13
42.....	260	361	52	5	23	2	12
43.....	258	393	51	5	23	2	12
44.....	256	427	50	5	22	2	12
45.....	255	464	49	5	22	2	12
46.....	252	502	48	5	22	2	12
47.....	248	543	47	5	22	2	12
48.....	243	583	45	4	21	2	12
49.....	239	632	43	4	21	2	12
50.....	233	680	41	4	21	2	12
51.....	227	732	40	4	21	2	12
52.....	220	789	38	3	21	2	12
53.....	214	850	36	3	21	2	12
54.....	206	916	33	3	21	2	12
55.....	199	989	31	3	20	2	11
56.....	191	1,069	29	2	20	2	11
57.....	183	1,157	26	2	19	2	10
58.....	173	1,254	24	2	19	2	10
59.....	164	1,361	21	2	18	2	10
60.....	148	1,423	19	2	17	1	9
61.....	137	1,548	16	1	16	1	8
62.....	126	1,688	14	1	15	1	8
63.....	113	1,844	12	1	14	1	8
64.....	100	2,019	9	1	13	1	7
65.....	90	2,304	7	1	12	1	6
66.....	75	2,536	5	0	10	1	6
67.....	59	2,798	3	0	8	1	4
68.....	41	3,094	2	0	6	0	3
69.....	22	3,423	1	0	3	0	2
70.....		3,784					
71.....		3,596					
72.....		3,411					
73.....		3,229					
74.....		3,052					
75.....		2,876					
76.....		2,703					
77.....		2,531					
78.....		2,362					
79.....		2,194					
80.....		2,028					
81.....		1,865					
82.....		1,705					
83.....		1,548					
84.....		1,391					

the age of entrance are by no means adequate for men who are well along towards the age of retirement.

The results in Table LVII, p. 150, should prove to be fairly effective answers to questions about the percentage of benefits to future entrants that will be provided for by their own contributions.

To illustrate the use of this table, we may note that for a group of persons entering at ages between 32 and 33 years—the average age of entrance obtained from the actual experience—contributions would purchase about 20 per cent of the benefits with retirement at age 55, a little more than 35 per cent of the benefits with retirement at age 60, about 65 per cent of the benefits with retirement at age 65, and more than the entire benefits under the assumption of retirement at age 70.

It may be further noted that, with retirements at 60, a group of persons entering at 20 and experiencing our withdrawal and death rates, would practically purchase its own pensions.

PRESENT VALUES OF FUTURE CONTRIBUTIONS AND BENEFITS PER
PARTICIPANT ON GIVEN ASSUMPTIONS AS TO AGES AT
RETIREMENT.

Tables LVIII, LIX, LX and LXI, pp. 151, 152, 153 and 154 respectively, give the present values of the future contributions and benefits on the given assumptions as to ages at retirement.

To save space, the algebraic formulas and commutation columns used in deriving the balance sheets from the given data are not exhibited here.

THE VALUATION BALANCE SHEET.

While Table LVII, p. 150, has to do with future entrants, the balance sheets (Tables LXII to LXV, pp. 159 and 160) have to do only with the financial status of the pension fund required for the active service.

The balance sheets contain the answers to questions in regard to the accrued liabilities on members of the active service January 1, 1916.

With our assumption of retirement on a pension at age 55, if eligible as explained above, the present value of the benefits to the active service of January 1, 1916, is \$11,437,473. Taking from this the present value of future contributions of employees in the active service and the funds on hand, there is left a balance of \$9,596,090 to be provided from sources other than employees' contributions, or to be regarded as a deficiency. As the Amendatory Act of 1915 requires that beginning with 1916, the city is to contribute for each of two years an amount equal to the deductions from employees' salaries during the previous year, there is a further asset whose present value is probably about \$270,000. It is, of course, not clear what part of this should be devoted to the present active service, and thus appear in the balance sheet, and what part to the future service, but it is fair to assume that it should nearly all be credited to the present active service.

With our assumption of no retirement on pension before age 60 the accrued liabilities are such that the excess of the present value of

liabilities over assets is \$6,775,569, when we exclude the contributions of the city. With a valuation of \$270,000 on the contributions from the city, there remains a deficiency of \$6,505,569.

Similarly, with no retirements below age 65, but with all those eligible at this age accepting pensions, we find an excess of the present value of liabilities over assets of \$4,761,133. With a valuation of \$270,000 on the contributions from the city, we have a deficiency of \$4,491,133.

OBSERVATIONS REGARDING THE DEFICIENCIES.

We have, earlier in this report, in dealing with the Chicago teachers' fund, tried to explain the main source of the accrued liabilities. An obligation to pay pensions to men, in the active service, who have been making no contributions or inadequate contributions, starts a pension system with accrued liabilities. Under the municipal employees' fund, the precaution was taken to accumulate a fund by contributing for five years before any pensions were paid. The contributions are probably inadequate to carry the interest at 4 per cent on the accrued liabilities, and hence, the accrued liabilities are probably not less than they were on July 1, 1911.

THE PERCENTAGE PENSIONS WILL BE OF SALARIES WHEN THE SYSTEM CARRIES ITS ULTIMATE NORMAL LOAD.

If the service is kept up to a fixed size by the addition of employees at age 32—approximately the entrance age experienced from July 1, 1911, to January 1, 1916—and if employees withdraw and die at rates given by that experience, then, when the service reaches the state where it carries its full pension burden, we find the following results:

1. If retirement on pensions were taken at age 55, the pension payments would, in the ultimate normal state under our active service table, be about 19 per cent of salaries.
2. If retirements were accepted at age 60, the pensions would, in the ultimate normal state, cost about 12 per cent of salaries.
3. Similarly, with age 65 for retirement on pensions, the pensions would, in the ultimate normal state, cost about 7 per cent of the salaries.
4. Likewise, with age 70 for retirement on pensions, the pensions would, in the ultimate normal state, cost about 3.8 per cent of salaries.

It should be remembered that these predictions involve withdrawal rates made from the service before any pensions were paid. The payment of pensions may modify these rates materially, and as such change is likely to take the form of a decrease in withdrawals, there will probably be some increase in the relative cost of pensions.

THE ACTIVE SERVICE CLASSIFIED BOTH BY AGES AND LENGTHS OF SERVICE.

By means of a table of double classification (Table XCII, p. 184), we show the number of employees of given age and length of service.

From this table, we may find very easily the number of persons eligible to a pension and the number that are nearly eligible.

With 20 years of service and age 55 or over, we find 297 employees. If all these who are eligible should apply for pensions, it would cost at once \$178,200 per year for the pensions. We note further that there are 174 employees with 20 years of service and of age 60 or over. There are 76 with 20 years of service and of age 65 or over.

Furthermore, we may form an idea of the number who will be eligible within the next few years. For this purpose, we find that there are 931 employees with 15 or more years of service and of age 50 or over. We may perhaps well assume that when an employee has five or fewer years to serve to meet the requirements for a pension, he will generally remain in the service until he is eligible unless he accepts a disability pension. This means that, except for deaths, we should in five years expect nearly 931 employees eligible for pensions. The deaths even under a high mortality rate would probably not reduce this number below 750. Hence, five years later than January 1, 1916, we may well expect to find 750 men eligible for pensions among the municipal employees. If they should all accept the pensions, the cost would amount to \$450,000, but many of them will doubtless prefer to continue in the service instead of accepting pensions.

If pensions were not accepted at an age under 60, but all those of age 60 or more should accept them, there would be 174 employees eligible, and the pensions would cost \$104,400 per year at present. In five years from now, with retirement at age 60, there would probably be about 400 persons eligible, and the pensions would cost \$240,000 per year if all eligible accepted pensions.

If pensions were not accepted at ages below 65, but all at age 65 or over should accept them, there would be 76 employees eligible, and pensions would cost \$45,600 per year at present. In five years from now, with retirements at age 65, there would probably be about 145 persons eligible, and the pensions would cost \$87,000 per year if all eligible accepted pensions.

The foregoing analysis, under different assumptions regarding the age of retirement, gives a fair idea as to what should be expected within a period of five years from January 1, 1916, but the cost for the first five years after beginning the payment of pensions does not indicate at all what the ultimate cost of the system will be, or what the condition of the fund is with respect to solvency. For ultimate costs in comparison with what the contributions will purchase, we must revert to Tables LVIII to LXI, pp. 151, 152, 153 and 154. For the solvency of the fund we must revert to the balance sheets (Tables LXII to LXV, pp. 159 and 160).

TABLE LXII.—(Municipal Employees).

BALANCE SHEET FOR PENSION FUND FOR MUNICIPAL EMPLOYEES OF CHICAGO UNDER ASSUMPTION OF RETIREMENT AT AGE 55, AS OF JANUARY 1, 1916.

LIABILITIES.		ASSETS.	
Present value of pension and withdrawal benefits to active service Jan. 1, 1916.....	\$11,437,473	Present value of contributions of employees (\$2.00 per month)....	\$ 998,103
		Present value of contributions of employees to make up balance of \$480 at retirement.....	317,598
		Cash on hand and invested funds	525,682
		¹ To be provided from other sources than employees' contributions or to be regarded as a deficiency.....	9,596,090
Total.....	\$11,437,473	Total.....	\$11,437,473

¹ The city is to contribute for two years from 1916 an amount equal to deductions from employees during the previous fiscal year. This would probably have a present value in the neighborhood of \$270,000.

TABLE LXIII.—(Municipal Employees).

BALANCE SHEET FOR PENSION FUND FOR MUNICIPAL EMPLOYEES OF CHICAGO UNDER ASSUMPTION OF RETIREMENT AT AGE 60, AS OF JANUARY 1, 1916.

LIABILITIES.		ASSETS.	
Present value of pension and withdrawal benefits to active service Jan. 1, 1916.....	\$8,640,678	Present value of contributions of employees (\$2.00 per month)....	\$1,109,641
		Present value of contributions of employees to make up balance of \$480 at retirement.....	229,786
		Cash on hand and invested funds	525,682
		¹ To be provided from other sources than employees' contributions or to be regarded as a deficiency.....	6,775,569
Total.....	\$8,640,678	Total.....	\$8,640,678

¹ The city is to contribute for two years from 1916 an amount equal to deductions from employees during the previous fiscal year. This would probably have a present value in the neighborhood of \$270,000.

TABLE LXIV.—(Municipal Employees).

BALANCE SHEET FOR PENSION FUND FOR MUNICIPAL EMPLOYEES OF CHICAGO UNDER ASSUMPTION OF RETIREMENT AT AGE 65, AS OF JANUARY 1, 1916.

LIABILITIES.		ASSETS.	
Present value of pension and withdrawal benefits to active service Jan. 1, 1916.....	\$6,614,783	Present value of contributions of employees (\$2.00 per month)....	\$1,194,012
		Present value of contributions of employees to make up balance of \$480 at retirement.....	133,956
		Cash on hand and invested funds	525,682
		¹ To be provided from other sources than employees' contributions or to be regarded as a deficiency.....	4,761,133
Total....	\$6,614,783	Total.....	\$6,614,783

¹ The city is to contribute for two years from 1916 an amount equal to deductions from employees during the previous fiscal year. This would probably have a present value in the neighborhood of \$270,000.

TABLE LXV.—(Municipal Employees).
BALANCE SHEET FOR PENSION FUND FOR MUNICIPAL EMPLOYEES OF
CHICAGO UNDER ASSUMPTION OF RETIREMENT AT AGE 70, AS OF
JANUARY 1, 1916.

LIABILITIES.		ASSETS.	
Present value of pension and withdrawal benefits to active service Jan. 1, 1916.....	\$3,520,024	Present value of contributions of employees (\$2.00 per month)....	\$1,268,589
		Present value of contributions of employees to make up balance of \$480 at retirement.....	78,249
		Cash on hand and invested funds	525,682
		¹ To be provided from other sources than employees' contributions or to be regarded as a deficiency.....	1,647,504
Total.....	\$3,520,024	Total.....	\$3,520,024

¹The city is to contribute for two years from 1916 an amount equal to deductions from employees during the previous fiscal year. This would probably have a present value in the neighborhood of \$270,000.

ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND.

THE BENEFITS.

The following outline gives briefly a notion of the benefits.

Service Pensions:

Pension of \$400 per annum is paid to anyone who retires after attainment of age 50, having served as a teacher in the public schools of the United States for at least 25 years, the last 15 of which have been spent in the public schools of this State, and provided the teacher has paid the sum of \$400 into the fund.

Disability Pensions:

Pension of \$16 per annum for each year of service, not to exceed \$400 per annum, is paid to one who retires on account of disability, provided such teacher has been in service in the public schools of the United States for at least 15 years, the last 9 of which have been spent in the public schools of this State, and provided also that the sum of \$400 has been paid into the fund by such teacher.

DATA USED IN VALUATION.

As already stated (see p. 77), the data on which we based our calculations was collected through the offices of the county superintendents of schools in all cases except the County of Cook. The only data available in these offices was the age, length of service and salary of the teachers in service during the calendar year 1915. There was no way by which we could gather any material that would enable us to determine the rates at which teachers were retiring from the service without pension. Moreover, the pension fund was not in existence before January 1, 1916, and consequently, it had no pension experience on which to base any prediction as to the rates at which members would accept pension in the future. As no tables exhibiting these rates in like communities among groups of similar employees were available, and since we did not feel justified in assuming that the withdrawal experience of such funds as offered statistics on this point, as for instance the Chicago or New York public school teachers' funds, could be applied with safety to a group such as the teachers involved in the Illinois State system, which includes a large number of teachers in rural schools and in small towns, we were driven to base our calculations on assumptions that certain events would happen. These assumptions, made after careful consideration of the data furnished by the county superintendents, were two in number. The first predicts fewer retirements on pension than would probably occur in actual experience, and the second possibly more rapid retirement on pension than should be expected.

ASSUMPTIONS MADE IN CALCULATIONS.

These assumptions are as follows:

1. Of the group eligible for pension, those whose salaries are under \$600 will elect to retire on pension when the conditions of eligibility are satisfied; and those whose salaries are \$600 or over will accept pensions at various ages, centering about 65 years, in such a way that, for purposes of calculation, we may accept age 65 as the age of retirement. This assumption will be referred to later as Hypothesis I.
2. Same as 1, except that \$800 is substituted for \$600. This assumption will be referred to as Hypothesis II.

NUMBER OF TEACHERS UNDER FUND.

On the teachers of Cook County, outside of Chicago, no data was available in the office of the county superintendent. To each of these teachers, 1,604 in all, we mailed a card with a circular letter and self-addressed, stamped envelope, requesting the desired information. In this way we derived data on slightly less than 50 per cent of such teachers. Of the 101 remaining counties in the State, 94 of the superintendents cooperated with us in gathering the data. We thus collected data on 21,085 teachers outside of Chicago.

As nearly as we can estimate, the teachers of Cook County, outside of Chicago, from whom we received no reply and those in the remaining counties whose superintendents failed to cooperate with us, not including those in the City of Peoria, total approximately 5,000. We thus accepted 26,000 as the possible number of teachers coming under this fund.

We assumed that the teachers on whom data was collected would afford a random sample of the whole group. On this assumption, results for the whole group were found by multiplying those found for 21,085 teachers by 26,000, and dividing by 21,085. This ratio, assumed to be 26/21, is used in deriving Tables LXX and LXXI from Tables LXVIII and LXIX respectively.

CLASSIFICATION OF DATA WITH REGARD TO AGE, SALARY AND LENGTH OF SERVICE.

In Table LXVI, we present, for the 21,085 teachers on whom data was collected, a classification in five-year periods with respect to age and length of service as of January 1, 1916. From this table, we derive immediately the number of those who have at least 25 years of service and are also at least 50 years of age. These constitute the group eligible for pensions January 1, 1916. This group consists of 699 who are eligible among the total of 21,085.

In Table LXVII, we present a classification in regard to age and salary of these 699 teachers eligible for pensions January 1, 1916.

MORTALITY RATES.

In the absence of data from which to derive rates of mortality, we made application of the rates given ¹ for women teachers on service pensions in New York City.

PREDICTIONS OF COST AT INTERVALS OF FIVE YEARS.

It is not claimed that Hypotheses I and II stated above will give results so close to those that will be actually experienced as to make

¹ Report on the Pension Funds of the City of New York, Part II, p. 103.

it desirable to present yearly predictions of costs. It is our plan to predict annual costs at five-year intervals beginning in 1916. As it is clear that the system could not be in full operation early in 1916, the prediction for 1916 would more reasonably apply to the year from July 1, 1916, to July 1, 1917.

ASSUMPTIONS IN REGARD TO GROUPS BECOMING ELIGIBLE.

We treated separately the group eligible January 1, 1916, and the groups which we predict will become eligible in the future. For the group eligible January 1, 1916, we simply applied the conditions stated above as Hypotheses I and II, and applied rates of mortality to determine the number of surviving pensioners.

In treating the subgroup of teachers who are not eligible at present on account of age or service, but who will be eligible, except for mortality and withdrawals, in five years from January 1, 1916, we calculated the expected number of survivors from our rates of survival, and assumed that if a teacher lacks less than five years of having the requisite service and age for a pension, he will, in general, remain in the service until eligible for the pension, except in case of death. By thus carrying forward, with rates of survival, the teachers of the subgroup not eligible in 1916, but eligible in 1921, if surviving, we are in a position to estimate the cost of pensions in 1921 for those who go on the pension roll in the five years from 1916 to 1921.

We further assumed that on January 1, 1921 (five years after our valuation) the subgroup which is not eligible in 1921 but which will be eligible five years thereafter, is like the subgroup just discussed in regard to predicted costs of pensions. The validity of this assumption involves the additional assumptions that certain withdrawal rates will continue to have about the same values as they have had in the past, and that the teaching service will not be so rapidly extended as to give us a very abnormal proportion coming on the eligible list in any five-year period in the future. In other words, for the future we assume that subgroups will progress to the eligible list in such a way that for each five-year period we have a new eligible subgroup like the one that we predict will be eligible in 1921.

As explained above, these assumptions involve the idea that, for ages under 50 or service periods under 25 years, the service has reached a somewhat stationary character so far as the number in the five-year subgroups near the age of retirement are concerned.

On the whole, it is more likely that such an assumption will lead to an undervaluation than to an overvaluation, as, in the first place, there is very likely some tendency towards lower withdrawal rates of teachers as a community becomes older; and, in the second place, the number of teachers has been increased considerably within the past twenty years.

In fact, we are giving a valuation as if the number of teachers in five-year periods has remained stationary for the past twenty years. On this account, it is not unlikely that our uncorrected valuations (columns 2, Tables LXVIII and LXIX) of the ultimate annual costs of a pension system for a teaching force of the size of that under consideration, should be increased by as much as 20 or 25 per cent, as is shown by the following:

An examination of the increase in the number of teachers in the public schools covered by the act in question shows that the increase of the total number of teachers for each five-year period over the number for the preceding one in the past three quinquennial periods is about 8 per cent for 1911-16 over 1906-11, and 5 per cent for 1906-11 over 1901-06. Furthermore, the number of teachers has increased over 50 per cent in the last 30 years.

The costs of pensions as shown in column marked (5) in Tables LXVIII and LXIX are given with correctional factors applied to those eligible in the future by increasing the valuation for 1926 by 5 per cent, that of 1931 by 10 per cent, that of 1936 by 15 per cent, and each of the remaining valuations by 20 per cent.

TOTAL CONTRIBUTIONS.

On account of the fact that the law allows a teacher employed before January 1, 1916, the option of whether he will come under the act, and gives him until September 1, 1920, to elect to come into the system, it seems impossible at present to offer any reliable prediction concerning the total amount of the contributions from the salaries of teachers.

If the system were in full force at the present time, with the service distribution shown in Table LXVI, the total annual contributions from the 21,085 teachers on whom we have data would amount to \$162,750, and this amount multiplied by the correctional factor, 26/21, would give approximately the total annual contributions for all the teachers involved in the act. It should be kept in mind that we are making predictions on the basis of a service of the size of the present one, and that if we tend to approach a condition with a larger percentage of teachers having 15 or more years, of service, it is obvious that the contributions will increase. In fact, it does not seem unlikely that such increase would amount to 20 per cent in the ultimate state, if we may judge from the increase that has been experienced in the service during the past 20 years.

DISCUSSION OF RESULTS.

We may note that in columns marked (3) on Tables LXVIII and LXIX, we find the total predicted costs of pensions per annum at five-year intervals for a group of 21,085 teachers, when we apply the methods explained above, with the numbers becoming eligible in five-year groups held constant.

Under Hypothesis I, these predicted costs increase for about 50 years until the cost amounts to \$779,839. Under Hypothesis II, they increase until they amount to \$966,732. If we apply a correctional factor to take account of increases in the service during the past, we obtain for the ultimate cost under Hypothesis I, the value \$935,807 shown in column marked (5) in Table LXVIII, and under Hypothesis II, the value \$1,160,078 shown in column marked (5) in Table LXIX.

In Tables LXX and LXXI, we show the resulting estimate cost for all teachers covered by the act. Tables LXVIII and LXIX apply to the 21,085 on whom we collected data as to age, length of service and salary, and do not include the teachers of the eight counties from which we failed to secure data. From available figures, however, we

estimate that there are in the neighborhood of 26,000 teachers covered by the act; and our estimates in Tables LXX and LXXI are simply obtained from figures in Tables LXVIII and LXIX, by multiplying those figures by 26/21 and recording results to the nearest \$1,000.

TABLE LXVI.—(Illinois State Teachers, male and female.)

SHOWING THE NUMBER OF MALE AND FEMALE TEACHERS IN ACTIVE SERVICE IN THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND, JANUARY 1, 1916, CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1, 1916. (Basis of 21,085 teachers.)

Ages Inclusive.	Years of service.										Totals.	
	0-4 incl.	5-9 incl.	10-14 incl.	15-19 incl.	20-24 incl.	25-29 incl.	30-34 incl.	35-39 incl.	40-44 incl.	45-49 incl.		50-55 incl.
17-19	1,375	4										1,379
20-24	7,272	1,257										8,529
25-29	1,399	2,832	371									4,602
30-34	266	857	1,106	104								2,333
35-39	76	230	461	572	77							1,416
40-44	37	85	178	343	345	43						1,031
45-49	18	31	79	127	269	247	36					807
50-54	8	10	33	41	95	*154	119	22				482
55-59	3	4	9	26	25	86	94	70	14			331
60-64	1		3	5	15	23	23	23	25			118
65-69		2		1	5	4	2	8	13	9	2	46
70-74	1	1						1	2	2	2	9
75-79		1									1	2
Totals	10,456	5,314	2,240	1,219	831	557	274	124	54	11	5	21,085

*The numbers enclosed between these lines represent the number eligible for pensions, January 1, 1916—in all, 699.

TABLE LXVII.—(Illinois State Teachers, male and female.)

TEACHERS UNDER ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND, WITH 25 OR MORE YEARS OF SERVICE AND 50 YEARS OR MORE OF AGE, CLASSIFIED IN REGARD TO SALARIES (BASIS OF 21,085 TEACHERS).

Age.	Less than \$600.	\$600-\$699 inclusive.	\$700-\$799 inclusive.	\$800-\$899 inclusive.	\$900 and over.	Totals.
50.....	31	12	10	9	20	82
51.....	16	10	10	6	16	58
52.....	20	7	6	3	17	53
53.....	21	7	7	7	9	51
54.....	13	9	7	4	18	51
55.....	23	9	8	3	20	63
56.....	22	14	14	6	13	69
57.....	21	9	15	5	19	59
58.....	12	11	4	5	14	46
59.....	11	3	2	3	8	27
60.....	5	9	2	3	3	22
61.....	6	4	1	1	8	20
62.....	12	3	1	1	6	23
63.....	7	3	3	3	2	18
64.....	5	1	1	1	3	11
65.....	6	2	1		1	10
66.....	4	2	1	1	2	10
67.....	2	1	1	1	2	7
68.....	3		2		4	9
69.....	1			1		2
70.....	2				2	4
71.....						
72.....		1				1
73.....				1		1
74.....	1					1
75.....						
76.....						
77.....					1	1
Totals.....	244	117	86	64	188	699

TABLE LXVIII.—(Illinois State Teachers, male and female.)

SHOWING TOTAL FUTURE COST OF PENSIONS FOR 21,035 TEACHERS IN THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND, AND THE AMOUNT OF TEACHERS' CONTRIBUTIONS WHEN THE SYSTEM IS FULLY IN FORCE. FIGURES GIVEN IN FIVE YEAR INTERVALS (BASIS OF 21,035 TEACHERS).

Results under Hypothesis I.

Year.	(1) Pensions to those at present eligible.	(2) Pensions to those eligible in future (present active service and future entrants.)	(3) Total pensions if the number becoming eligible in five year groups remains constant.	(4) Total Contributions.	(5) Total pensions with correctional factor applied (See p. 164.)
1916.....	\$108,400	.....	\$108,400	.....	.....
1921.....	116,591	\$ 91,708	208,299	.....	.....
1926.....	153,467	181,519	334,986	.....	\$344,062
1931.....	178,134	278,021	456,155	.....	483,957
1936.....	132,969	453,927	586,896	* \$162,750	654,985
1941.....	86,097	593,434	679,531	162,750	824,047
1946.....	45,452	691,159	736,611	162,750	874,843
1951.....	17,823	747,607	765,430	162,650	914,951
1956.....	4,576	771,987	776,563	162,750	930,960
1961.....	634	778,794	779,428	162,750	935,187
1966.....	33	779,784	779,817	162,750	935,774
1971.....	.....	779,839	779,839	162,750	935,807

*We do not predict the amount of the contributions before 1936 because we have no way of knowing even approximately the number of experienced teachers who will elect to come under the pension system.

TABLE LXIX.—(Illinois State Teachers, male and female.)

SHOWING THE TOTAL FUTURE COST OF PENSIONS FOR 21,035 TEACHERS IN THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND, AND THE AMOUNT OF TEACHERS' CONTRIBUTIONS WHEN THE SYSTEM IS FULLY IN FORCE. FIGURES GIVEN IN FIVE YEAR INTERVALS (BASIS OF 21,035 TEACHERS).

Results under Hypothesis II.

Year.	(1) Pensions to those at present eligible.	(2) Pensions to those eligible in future (present active service and future entrants).	(3) Total pensions if the number becoming eligible in five year groups remains constant.	(4) Total contributions.	(5) Total pensions with correctional factor applied (See p. 164.)
1916.....	\$185,200	.....	\$185,200	.....	.....
1921.....	176,165	\$165,988	342,153	.....	.....
1926.....	181,473	319,398	500,871	.....	\$516,841
1931.....	178,134	464,914	643,048	.....	689,539
1936.....	132,969	640,820	773,789	* \$162,750	869,912
1941.....	86,097	780,327	866,424	162,750	1,022,489
1946.....	45,452	878,052	923,504	162,750	1,099,114
1951.....	17,823	934,500	952,323	162,750	1,139,223
1956.....	4,576	953,880	963,456	162,750	1,155,232
1961.....	634	965,687	966,321	162,750	1,159,453
1966.....	33	966,677	966,710	162,750	1,160,045
1971.....	.....	966,732	966,732	162,750	1,160,078

* We do not predict the amount of the contributions before 1936 because we have no way of knowing even approximately the number of experienced teachers who will elect to come under the pension system.

TABLE LXX.—(Illinois State Teachers, male and female.)

SHOWING ESTIMATED FUTURE COSTS OF PENSIONS FOR THE ENTIRE GROUP OF TEACHERS COVERED BY THE ACT, REGULATING THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND AND THE CONTRIBUTIONS WHEN THE SYSTEM COMES FULLY INTO FORCE (BASIS OF 26,000 TEACHERS).

Results under Hypothesis I.

Year.	(1) Total cost of pensions if the number becoming eli- gible in five year groups remains constant.	(2) Total contributions.	(3) Total cost of pensions if we apply the correctional factor to allow certain varia- tions in the number becom- ing eligible. (See p. 164.)
1916.....	\$134,000		
1921.....	258,000		
1926.....	415,000		\$ 426,000
1931.....	565,000		599,000
1936.....	727,000	\$201,000	811,000
1941.....	841,000	201,000	1,020,000
1946.....	912,000	201,000	1,083,000
1951.....	948,000	201,000	1,133,000
1956.....	961,000	201,000	1,153,000
1961.....	965,000	201,000	1,159,000
1966.....	965,000	201,000	1,159,000
1971.....	966,000	201,000	1,159,000

¹The estimated costs in Tables LXX and LXXI are obtained by multiplying results in Tables LXVIII and LXIX by 26÷21, and recording the products only to the nearest \$1,000.

TABLE LXXI.—(Illinois State Teachers, male and female.)

SHOWING ESTIMATED FUTURE COSTS OF PENSIONS FOR THE ENTIRE GROUP OF TEACHERS COVERED BY THE ACT, REGULATING THE ILLINOIS STATE TEACHERS' PENSION AND RETIREMENT FUND AND THE CONTRIBUTIONS WHEN THE SYSTEM COMES FULLY INTO FORCE (BASIS OF 26,000 teachers)

Results under Hypothesis II.

Year.	(1) Total cost of pensions if the number becoming eli- gible in five year groups remains constant.	(2) Total contributions.	(3) Total cost of pensions if we apply the correctional factor to allow certain varia- tions in the number becom- ing eligible. (See p. 164.)
1916.....	\$ 229,000		
1921.....	424,000		
1926.....	620,000		\$ 640,000
1931.....	796,000		854,000
1936.....	953,000	\$201,000	1,077,000
1941.....	1,073,000	201,000	1,266,000
1946.....	1,143,000	201,000	1,361,000
1951.....	1,179,000	201,000	1,410,000
1956.....	1,193,000	201,000	1,430,000
1961.....	1,196,000	201,000	1,436,000
1966.....	1,197,000	201,000	1,436,000
1971.....	1,197,000	201,000	1,436,000

SALARIES.

In Table XCV, Chapter VI, p. 186, we show a classification of the 21,085 teachers from 94 counties with respect to salaries. It should be noted that 4,912 of these teachers receive less than \$400 per year, the amount of the pension.

It is found that the total of salaries for the group of 21,085 teachers amounts roughly to \$11,000,000.

GENERAL STATEMENT CONCERNING THE ULTIMATE COST.

While there is considerable variation in the results that we have obtained from different hypotheses, it seems fairly safe to say that the ultimate annual pension payments under the present system will amount to between 7 and 12 per cent of the annual salary payments. On the basis of available information, it does not seem safe to make a much more definite prediction than this at the present time.

CHAPTER VI.

STATISTICS RELATING TO THE FUNDS CREATED
UNDER THE SEVERAL PUBLIC SERVICE PENSION
ACTS OF THE STATE OF ILLINOIS.

Of the fifteen pension acts on the statute books of Illinois on January 1, 1916, one, namely, the Fire Insurance Patrolmen's Act, does not involve the expenditure of public money; another, namely, the Act of 1915 relating to park police, was not put into force November 1, 1916; and a third, namely, the Act for county employees of Cook County was declared invalid on August 2, 1916.

Of the remaining twelve acts, the one relating to the State Teachers' Pension and Retirement Fund, is State-wide in its scope after excluding the cities of Chicago and Peoria. The Firemen's Act applies to all cities, towns and villages of 5,000 or more inhabitants. The 9,000 to 50,000 Policemen's Act is self explanatory, with respect to the slope of its application. The Policemen's Act relating to cities of 50,000 or more inhabitants is self explanatory except that Chicago is excluded. The Teachers' Act, applying to cities of 65,000 or more inhabitants, relates only to the city of Peoria. The seven remaining acts apply to institutions situated in the city of Chicago. Under these, the beneficiaries are:

Chicago policemen; Chicago public school teachers; Municipal employees of Chicago; Park policemen; Public school employees; Public library employees; Employees of the House of Correction.

To determine the number and extent of the funds outside of Cook County in operation under the Firemen's Act and the two police acts not applicable to Chicago, we addressed a letter on March 2, 1916 to the mayor of each city, town or village of 5,000 or more inhabitants in the State, requesting information regarding the existence of pension funds in the corporation under his administration. This letter was followed by another on April 27 and a third on August 21. The result was that replies were received from all such corporations, excepting the cities of Spring Valley and Mount Carmel. Judging from the size of these cities, it is to be presumed that no pension funds exist in either of them, so that we may state with confidence that all the pension funds in this State outside of Chicago not listed above, are for the beneficiaries and in the cities listed below.

For Firemen: Peoria, East St. Louis, Springfield, Rockford, Joliet, Decatur, Aurora, Elgin, Bloomington, Evanston, Moline, Oak Park, Sterling.

For Policemen: Act relating to cities of 9,000 to 50,000 inhabitants: Rockford, Joliet, Decatur, Aurora, Bloomington, Evanston, Moline, Champaign, Quincy.

For Policemen. Act relating to cities of 50,000 or more inhabitants: Peoria, Springfield.

The object of this chapter is to present in tabular form further statistics than those given in Chapter V relating to the several pension funds.

TABLE LXXII—(Chicago Policemen).

SHOWING BY AGES AS OF JANUARY 1, 1916 THE NUMBER IN ACTIVE SERVICE OR ON PENSION ON THAT DATE.

Age	Active Service	Disability Pensioners.	Service Pensioners.	Widows of Class A ¹	Widows of Class B ¹	Widows of Class C ¹	Age	Families of Children with respect to age of youngest child.
22				1			7	1
23				1			8	
24							9	2
25	9						10	2
26	28						11	4
27	104						12	1
28	78						13	4
29	133			1		1	14	2
30	142			1		1	15	6
31	201			1	1			
32	207							
33	220	2		2				
34	209				2	2		
35	210					1		
36	255			3		2		
37	211	2				2		
38	250			1	2			
39	234			1	5	5		
40	151	1		3	1	5		
41	111				4	5		
42	115			3	4	4		
43	115		3	4	6	6		
44	117	2	1	4	6	7		
45	100	1	2	3	6	10		
46	101	1	9	6	6	12		
47	99	1	10	2	5	8		
48	102		11	5	7	11		
49	104	2	17	8	6	5		
50	127	1	19	5	12	9		
51	109		21	9	16	20		
52	120	2	21	5	8	9		
53	129		21	6	17	17		
54	130	3	28	1	7	11		
55	99	5	31	6	13	19		
56	109	4	26	4	15	10		
57	87	2	30	4	11	10		
58	76	5	24	3	8	11		
59	55	3	21	7	6	2		
60	39	2	29	2	7	3		
61	38		21	2	2	4		
62	23	1	17	3	11	5		
63	17	2	23	1	10	3		
64	14		14	2	6	5		
65	14		10	2	9	4		
66	9		13	2	13	5		
67	13	2	10	1	4	2		
68	7		14	1	3	1		
69	5	1	18	1	5	3		
70	3		14	1	7	4		
71			15	1	3	4		
72			12	2	2	2		
73	1		9		6	3		
74			9		2			
75			5		4			
76			7		2	1		
77		1	4		3	1		
78			3		1			
79			3		1			
80			3	1	2			
81			2		1			
82			2					
83			1	1				
84			1					
85								
86			1					
Totals	4,830	46	555	123	278	255	Total	22

¹ For definitions, see page 91.

TABLE LXXIII.—(Chicago Policemen).
SHOWING THE NUMBER AND SALARIES OF POLICEMEN IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE.

Years of Service	\$900 to \$999 Inclusive	\$1,000 to \$1,249 Inclusive	\$1,250 to \$1,499 Inclusive	\$1,500 to \$1,749 Inclusive	\$1,750 to \$1,999 Inclusive	\$2,000 to and over	Totals
0.....	89	3					92
1.....	106	281	9				396
2.....	5	55	123	1			184
3.....	1	6	105		1		113
4.....	1	16	208	1			226
5.....	1	5	244				250
6.....		5	136	2			143
7.....		11	63				74
8.....		9	372				381
9.....		11	625	21			657
10.....		7	387	26	1	1	422
11.....		9	23				32
12.....		8	24	1			33
13.....		2	72	10	2	2	88
14.....		4	15				19
15.....		6	80	19	3	8	116
16.....		3	17		1	1	22
17.....		1	8	2	2		13
18.....		13	52	5	2	2	74
19.....		5	141	39	6	15	206
20.....		11	55	17	3	5	91
21.....		10	68	17	3	5	103
22.....		8	42	7	3	2	62
23.....		6	167	36	8	9	226
24.....		4	117	24	10	4	159
25.....		5	81	13	11	4	114
26.....			103	23	14	10	150
27.....		3	51	15	6	3	78
28.....		2	56	13	4	7	82
29.....		4	29	10	3	3	49
30.....			26	2	2	2	32
31.....		1	38	8	5	10	62
32.....			2	1	1	1	5
33.....		1	25	4	1	5	36
34.....		1	7	1		2	11
35.....			7			2	9
36.....			3	1			4
37.....						1	1
38.....			2				2
39.....			2	1			3
40.....			5				5
41.....							
42.....			4	1			5
Totals	203	516	3,594	321	92	104	4,830

TABLE LXXIV.—(Chicago Policemen).
SHOWING THE NUMBER OF CHICAGO POLICEMEN IN ACTIVE SERVICE JANUARY 1, 1916, CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1, 1916.

Ages Inclusive	YEARS OF SERVICE									Totals
	0-4 Years Inclusive	5-9 Years Inclusive	10-14 Years Inclusive	15-19 Years Inclusive	20-24 Years Inclusive	25-29 Years Inclusive	30-34 Years Inclusive	35-39 Years Inclusive	40-42 Years Inclusive	
25-29.....	347	5								352
30-34.....	430	509	40							979
35-39.....	204	752	181	18	5					1,160
40-44.....	19	202	225	109	52	2				609
45-49.....	7	19	105	140	192	43				506
50-54.....	3	5	28	119	257	183	17	3		615
55-59.....		10	12	32	121	180	69	2		426
60-64.....	1	2	2	11	9	59	41	5	1	131
65-69.....		1	1	1	5	5	18	9	8	48
70-73.....				1		1	1		1	4
Totals	1,011	1,505	594	431	641	473	146	19	10	4,830

TABLE LXXV—(Chicago Policemen).

SHOWING THE NUMBER OF MEN IN ACTIVE SERVICE WITH 20 YEARS OR MORE OF SERVICE TO THEIR CREDIT ON JANUARY 1, 1916, CLASSIFIED INTO GROUPS ACCORDING TO NUMBER OF YEARS MARRIED.

Age	Number Married 0-4 Years inclusive		Age of Youngest Wife in Column A		Average Age of Wife in Column A		Number Married 5-9 Years inclusive		Age of Youngest Wife in Column B		Average Age of Wife in Column B		Number Married 10-14 Yrs. inclusive		Age of Youngest Wife in Column C		Average Age of Wife in Column C		Number Married 15-19 Yrs. inclusive		Age of Youngest Wife in Column D		Average Age of Wife in Column D		Number Married 20 Years or more		Total Number of Married Men	Total Number of Un- married Men	Age	Percentage of total number in group compared with total number of married men as given in the Table
	A				B				C				D				E			F										
38.																	1	37	37					1	1	33	Group A	3.8		
39.																	2	38	39					3	1	39				
40.	1	40	40		1	34	34						1	37	37			1	32	32				1		4	1	40	Group B	4.6
41.													1	32	32			2	40	40					3	3	41			
42.	1	36	36		2	35	38						1	35	35				5	35				1	5	0	42	Group C	8.1	
43.	2	28	33										4	31	36				32	38				2	13	4	43			
44.					4	29	35						4	33	39				3	36	39				9	20	1	44	Group D	10.2
45.	1	39	39		2	30	36						1	42	42				4	36	39			10	18	2	45			
46.	2	34	34		4	34	38						8	35	41				5	35	43			20	39	5	46	Group E	73.3	
47.	5	28	40		1	38	38						4	31	37				9	37	40			25	44	8	47			
48.	1	36	36		5	30	39						8	34	39				10	38	44			24	48	7	48			
49.	3	36	38		3	41	42						5	34	43				4	43	45			37	52	12	49	100.0		
50.	5	39	45		3	39	50						7	40	43				12	35	41			37	64	15	50			
51.	2	25	32		2	43	47						6	37	42				10	35	44			41	61	6	51	Percentage of total number in group compared with total number of married and unmarried men as given in the Table		
52.	2	34	37		2	40	42						3	33	41				7	38	45			64	78	14	52			
53.	2	46	48		7	31	41						10	35	46				8	41	43			63	95	14	53			
54.	1	33	33		4	32	42						5	38	42				9	41	44			76	95	17	54			
55.	2	25	40		1	40	40						4	40	49				4	43	51			56	67	12	55			
56.	3	38	47										4	35	48				2	39	47			70	70	18	56			
57.	2	46	48		1	43	43						1	38	38				5	38	46			57	66	11	57			
58.	1	40	40		4	36	41						3	40	44				2	51	53			46	56	12	58			
59.	2	42	47		1	50	50																	39	42	9	59			
60.	2	28	37										2	49	53				1	41	41			19	24	11	60			
61.	1	39	39		1	52	52																	26	23	6	61	Group A	3.3	
62.																			1	44	44				15	16	3	62	Group B	3.9
63.					1	44	44					1	43	43										8	10	4	63	Group C	6.8	
64.												3	50	51				1	40	40				8	12	1	64	Group D	8.5	
65.					1	66	66																	11	12	1	65	Group E	61.4	
66.																								7	7	1	66	Group F	16.1	
67.	1	60	60														1	63	63					9	11	2	67	100.0		
68.																								2	2	4	68			
69.													1	48	48									4	5		69			
70.																										3	70			
Totals.	42				50							87					109					792	1,080	209						

TABLE LXXVI—(Chicago Policemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS THE TOTAL ASSETS AT THE BEGINNING OF THE PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll on July 1 of each year commencing in 1908
		Total		Total	Total		Total		
		From policemen	Other sources		To pensioners	Other than to pensioners			
Jan. 1, 1905 to Jan. 2, 1906.....	\$ 86,743 09			\$283,783 42			\$259,239 37	\$ 24,544 05	
Jan. 2, 1906 to Jan. 1, 1907.....	111,237 14			445,936 54			279,033 90	166,882 64	
Jan. 1, 1907 to Jan. 1, 1908.....	278,169 78			461,063 15			301,909 66	159,158 49	
Jan. 1, 1908 to Jan. 1, 1909.....	437,328 27			470,386 81			370,762 80	99,624 01	609
Jan. 1, 1909 to Jan. 1, 1910.....	536,952 28			467,566 35			392,000 34	75,566 01	663
Jan. 1, 1910 to Aug. 10, 1910.....	612,518 29							-434,192 38	719
Aug. 10, 1910 to June 30, 1911.....	178,395 91	\$ 59,266 66	\$477,928 24	537,194 90		\$426,562 20	\$ 6,264 08	104,368 62	833
June 30, 1911 to July 1, 1912.....	282,764 53							-96,551 13	907
July 1, 1912 to June 30, 1913.....	186,233 40			593,790 72		602,750 32	6,588 48	-15,548 08	1,039
July 1, 1913 to June 30, 1914.....	170,685 32			708,889 72		685,495 97	10,537 56	16,669 66	1,111
July 1, 1914 to June 30, 1915.....	187,354 98			736,385 69		737,935 91	23,870 48	-12,087 78	1,191
June 30, 1915.....	175,267 20							23,870 48	
Jan. 1, 1915 to Jan. 1, 1916.....	199,137 68	117,209 35	583,079 67	700,289 02		770,365 42	8,214 78	-78,291 18	1,257
Jan. 1, 1916.....	120,846 50								

This number taken as of January 1, 1916.

TABLE LXXVII—(Chicago Firemen).

SHOWING BY AGES AS OF JANUARY 1, 1916 THE NUMBER IN ACTIVE SERVICE OR ON PENSION ON THAT DATE.

Age	Active service	Disability pensioners	Service pensioners	¹ Widows of class A	¹ Widows of class B	¹ Widows of class C	Age	Children on pension roll
23.....	6						0- 1	0
24.....	17					1	1- 2	4
25.....	30			1			2- 3	1
26.....	39			0		1	3- 4	7
27.....	46			2		4	4- 5	5
28.....	56			0		0	5- 6	13
29.....	66			2		2	6- 7	12
30.....	87			1		1	7- 8	12
31.....	109			1		0	8- 9	12
32.....	93	1		1		0	9-10	7
33.....	92			2		0	10-11	10
34.....	73	2		2		3	11-12	10
35.....	83	2		1		1	12-13	13
36.....	79	1		3		3	13-14	24
37.....	77	2		2	1	2	14-15	22
38.....	75	7		1	1	4	15-16	12
39.....	70			4	3	4		
40.....	80	1		1	1	2		
41.....	53	2		3	3	2		
42.....	53	2		2	0	4		
43.....	59	4		3	4	3		
44.....	66	3	3	0	2	6		
45.....	52	3	4	5	4	2		
46.....	53	5	4	5	4	5		
47.....	44	6	4	7	0	3		
48.....	42	1	7	1	3	1		
49.....	43	4	3	1	4	2		
50.....	41	3	5	3	4	3		
51.....	46		7	2	3	4		
52.....	24	3	7	5	3	3		
53.....	51	3	7	5	5	0		
54.....	29	4	8	0	7	2		
55.....	25	5	15	3	4	2		
56.....	19		8	2	4	4		
57.....	23	1	5	0	4	0		
58.....	18	1	4	0	1	0		
59.....	15	2	4	2	4	2		
60.....	11	1	12	1	4	2		
61.....	2	3	2	2	5	0		
62.....	2	1	2	2	4	0		
63.....	9	2	4	1	3	2		
64.....	5		5	0	4	2		
65.....	1	1	4	1	5	0		
66.....	4	1	4	1	7	1		
67.....	2		3	1	2	0		
68.....	3	1	2	0	2	0		
69.....		1	6	0	4	1		
70.....		1	1	2	1			
71.....			3		4			
72.....		1	6		0			
73.....			3		1			
74.....			2		0			
75.....			2		2			
76.....		1	1		1	1		
77.....			2		1			
78.....			2					
79.....			1					
80.....			1					
81.....					1			
82.....					1			
83.....		1						
84.....					1			
85.....								
89.....			1					
Totals.....	1, 973	83	164	84	122	85	Total.....	164

¹ For definitions, see page 112.

TABLE LXXVIII—(Chicago Firemen).

SHOWING THE NUMBER AND SALARIES OF FIREMEN IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE.

Years of Service	Less than \$1,000	\$1,000-\$1,249 Inclusive	\$1,250-\$1,499 Inclusive	\$1,500-\$1,749 Inclusive	\$1,750-\$1,999 Inclusive	\$2,000-\$2,249 Inclusive	\$2,250-\$2,499 Inclusive	\$2,500-\$2,749 Inclusive	\$2,750-\$2,999 Inclusive	\$3,000 and over	Totals
0.....	5	6	1								12
1.....		51	7			1					59
2.....		55	36	1	1	1					94
3.....		3	108								111
4.....			69	1							70
5.....			84								84
6.....			90	3	1						94
7.....			61	8	1						70
8.....	1		135	10							146
9.....	1		248	23	1						273
10.....	1		40	18	1	3					63
11.....			40	13		2					55
12.....			89	17		8					114
13.....			21	9		5					35
14.....			18	8		5					31
15.....			27	2	1	8				4	42
16.....			22	16	2	3					43
17.....			24	10		4					38
18.....			21	14		11		1		2	49
19.....			17	15	1	8				1	42
20.....			14	10		5				2	31
21.....			10	12		7					29
22.....			16	4		4				1	25
23.....			19	18	2	13				2	54
24.....			18	15		16				3	52
25.....			15	11		6				1	33
26.....			8	12	1	9			1	5	36
27.....			11	7		6	1			1	26
28.....			14	7		10				6	37
29.....			5	6		9				1	21
30.....		1	7	13		11				3	35
31.....			1	4		7					12
32.....		1	1	3		7				1	13
33.....			3	3	1	2					9
34.....				5							5
35.....				1		4				2	7
36.....				1		2				1	4
37.....						2					2
38.....		1		1	1	2		1		1	7
39.....			1			2					3
40.....								1		1	2
41.....						1					1
42.....						1				1	2
43.....						1				1	1
44.....				1							1
Totals...	8	118	1 301	302	14	186	1	3	1	39	1,973

TABLE LXXIX—(Chicago Firemen).

SHOWING THE NUMBER OF CHICAGO FIREMEN IN ACTIVE SERVICE, JANUARY 1, 1916, CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1, 1916.

Ages Inclusive	YEARS OF SERVICE									Totals
	0-4 Years Inclusive	5-9 Years Inclusive	10-14 Years Inclusive	15-19 Years Inclusive	20-24 Years Inclusive	25-29 Years Inclusive	30-34 Years Inclusive	35-39 Years Inclusive	40-44 Years Inclusive	
	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	Years Inclusive	
23-24.....	23									23
25-29.....	184	53								237
30-34.....	120	305	29							454
35-39.....	17	231	124	12						384
40-44.....	1	65	97	113	34	1				311
45-49.....	1	10	37	63	88	34	1			234
50-54.....		2	5	24	57	75	27	1		191
55-59.....		1	6	2	11	37	36	6	1	100
60-64.....					1	5	8	10	5	29
65-68.....						1	2	6	1	10
Totals.....	346	667	298	214	191	153	74	23	7	1,973

TABLE LXXX—(Chicago Firemen).

SHOWING THE NUMBER OF MEN IN ACTIVE SERVICE WITH 20 YEARS OR MORE OF SERVICE TO THEIR CREDIT ON JANUARY 1, 1916, CLASSIFIED INTO GROUPS ACCORDING TO NUMBER OF YEARS MARRIED.

Age	Number married 0-4 years inclusive		Average age of wife in column A.	Number married 5-9 years inclusive		Average age of wife in column B.	Number married 10-14 years inclusive		Average age of wife in column C.	Number married 15-19 years inclusive		Average age of wife in column D.	Number married 20 years or more		Total number of married men	Total number of unmarried men	Age	Percentage of total number in group compared with total number of married men as given in the Table.	
	A	B		C	D		E	F											
42	2	34	35				1	36	36	5	37	40	8				42	Group A	3.5
43				1	36	35	2	4	32	36	1	43	43	3	9		43	Group B	3.8
44							3	3	37	38	5	36	41	8	15	3	44		
45				1	35	35	3	3	33	36	7	36	39	9	20		45		
46								3	35	40	4	36	40	13	20	2	46	Group C	6.6
47	1	49	49				1	38	38	5	41	43	15	22	2		47	Group D	16.1
48	1	23	23	2	40	41	2	36	41	4	39	43	14	23	3		48		
49	1	36	36	1	36	36	2	37	41	6	37	42	19	29	2		49		
50				3	35	39	2	34	39	4	40	43	15	24	6	50	Group E	70.0	
51	1	47	47	1	42	42	3	43	49	2	40	43	25	32	4	51			
52				3	45	47				5	37	47	10	18	2	52		100.0	
53	1	44	44	1	38	38	1	43	43	6	40	45	29	38	8	53		Percentage of total number in group compared with total number of married and unmarried men as given in the Table	
54	1	39	39	1	43	43				3	38	44	21	26	2	54			
55												12	14	3	56				
56	2	50	52									12	14	3	56				
57	1	53	53				1	50	50	1	46	46	15	18	4	57			
58												15	15	1	58				
59	1	51	51	1	39	39				2	38	49	10	14		59			
60										1	55	55	7	8	3	60			
61												2	2	2		61			
62												2	2	2		62	Group A		3.1
63								1	39	39		7	8	1	63	Group B	3.3		
64												4	4	1	64	Group C	5.8		
65														1	65	Group D	14.3		
66	1	47	47									1	2	2	66	Group E	62.1		
67	1	53	53									1	2		67	Group F	11.4		
68												3	3		68				
69															69				
Totals	14			15			26			64		278	397	51			100.00		

TABLE LXXXI—(Chicago Firemen).

SHOWING THE NUMBER OF SERVICE AND DISABILITY PENSIONERS RECEIVING LESS THAN \$600 AND MORE THAN \$900 PER YEAR AND THE AMOUNTS THUS RECEIVED, CLASSIFIED BY AGES AS OF JANUARY 1, 1916.

Age	Number receiving less than \$600	Total amount less than \$600	Number receiving more than \$900	Total amount more than \$900	Age	Number receiving less than \$600	Total amount less than \$600	Number receiving more than \$900	Total amount more than \$900
32					54	2	66	4	138
33					55	2	66	3	114
34	1	\$72			56			2	14
35					57			2	14
36					58				
37					59	1	75	2	14
38	1	62			60			4	138
39					61	1	33	1	100
40	1	33			62				
41			1	7	63	2	54	1	7
42					64	1	33	2	307
43					65			3	832
44					66			2	31
45	1	33	1	100	67			2	2,600
46	1	33			68	1	26		
47	1	33	2	482	69	1	33		
48					70	1	33		
49	2	66	1	100	71			2	482
50	1	100	1	7	72	2	58	1	1,100
51					73	1	65	2	14
52	3	250	1	100	74				
53	2	50	2	107	75	1	75	1	7

TABLE LXXXI—Concluded.

Age	Number receiving less than \$600	Total amount less than \$600	Number receiving more than \$900	Total amount more than \$900	Age	Number receiving less than \$600	Total amount less than \$600	Number receiving more than \$900	Total amount more than \$900
76.....	2	108	.....	.....	81.....	.....	.....	.....	.....
77.....	1	72	.....	.....	82.....	.....	.....	.....	.....
78.....	1	75	.....	.....	83.....	1	72	.....	.....
79.....	.....	.....	.....	.....	Totals	35	\$1, 676	44	\$6, 822
80.....	.....	.....	.....	.....	

TABLE LXXXII—(Chicago Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1900, THE TOTAL ASSETS JANUARY 1, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Year	Total assets January 1st	Total receipts	Disbursements			Excess of receipts over disbursements	Pensioners on roll January 1st		
			To pensioners	Other disbursements	Total		Former employees	Widows	Children
1900....	\$ 60, 309	\$102, 116	\$ 85, 081	.....	\$ 85, 081	*\$ 17, 035	.....	.....	.....
1901....	77, 344	141, 801	91, 063	.....	91, 063	50, 738	.....	.....	.....
1902....	128, 082	144, 103	107, 765	.....	107, 765	36, 338	.....	.....	.....
1903....	164, 419	142, 237	112, 510	.....	112, 510	29, 727	.....	.....	.....
1904....	194, 146	103, 427	120, 686	\$ 15	120, 701	-17, 274	85	139	195
1905....	176, 872	108, 083	128, 581	320	128, 901	-20, 818	81	151	191
1906....	156, 054	210, 875	135, 353	330	135, 683	75, 192	87	166	194
1907....	231, 247	208, 671	148, 546	403	148, 949	59, 722	91	174	194
1908....	290, 969	181, 149	181, 911	388	182, 299	-1, 150	95	186	188
1909....	289, 819	252, 328	211, 460	961	212, 421	39, 907	133	194	177
1910....	329, 727	223, 221	230, 725	896	231, 621	-8, 400	170	207	175
1911....	321, 326	225, 934	251, 182	909	252, 091	-26, 157	175	235	194
1912....	295, 170	231, 021	268, 387	970	269, 357	-38, 336	190	243	192
1913....	256, 834	233, 634	287, 248	989	288, 237	-54, 603	202	264	188
1914....	202, 231	225, 026	309, 234	737	309, 971	-84, 945	233	270	175
1915....	117, 286	226, 196	339, 911	470	340, 381	-114, 185	244	283	169
1916....	3, 101	.....	*184, 425	.....	.....	.....	247	291	164

¹ Tax levy of 1915 collectable in 1916, \$200,000 not included in above.

² Pensions for 6 months of 1916.

³ The sign — indicates excess of disbursements over receipts.

TABLE LXXXIII.—(Chicago Teachers).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER IN ACTIVE SERVICE OR ON PENSION ON THAT DATE.

Age	Active Service		Pensioners				Age	Active Service		Pensioners			
	Male	Female	Service		Disability			Male	Female	Service		Disability	
			Male	Female	Male	Female				Male	Female	Male	Female
20.....		20					55.....	18	84		16		5
21.....	1	61					56.....	19	88		19		2
22.....	6	144					57.....	7	63	1	17		1
23.....	7	223					58.....	21	44		23		3
24.....	14	267					59.....	12	35	1	23		4
25.....	11	253					60.....	3	40		25		1
26.....	4	253					61.....	6	25		14		1
27.....	18	219					62.....	5	26		18		
28.....	17	215					63.....	5	18	1	15		
29.....	12	189					64.....	10	16	3	12		1
30.....	14	147					65.....	4	13		17		
31.....	20	154					66.....	6	7		11		
32.....	21	159					67.....	4	5	1	5		
33.....	17	199					68.....		3		11	1	1
34.....	25	179					69.....	5	1	2	10		
35.....	20	212					70.....	2	6	2	12		
36.....	15	254			1		71.....	2	3		5		1
37.....	22	224					72.....		3	1	12		
38.....	27	211				1	73.....	4	3	1	8		
39.....	20	233					74.....	1	2		6		
40.....	31	268			2		75.....		2		3		
41.....	21	258			1		76.....		1		9		
42.....	19	229		1	1		77.....		1		5		
43.....	11	211			1		78.....	1		1	1		
44.....	28	203		2	4		79.....			1	4		
45.....	32	228		4	1		80.....			1	1		
46.....	17	222		5	2		81.....			2	1		
47.....	20	178		6	2		82.....				4		
48.....	22	188		12	3		83.....				3		
49.....	17	150		11	5		84.....						
50.....	20	147		18	2		85.....			2	1		
51.....	26	133		23	2		86.....				2		
52.....	16	105		1	26	1	87.....						
53.....	14	99			18	3							
54.....	24	86		1	28	2	Totals	744	7,010	22	467	1	54

TABLE LXXXIV.—(Chicago Teachers, Female).

SHOWING THE NUMBER AND SALARIES OF FEMALE TEACHERS IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE.

Years of Service	\$600-\$699 Inclusive.	\$700-\$799 Inclusive.	\$800-\$899 Inclusive.	\$900-\$999 Inclusive.	\$1,000-\$1,099 Inclusive.	\$1,100-\$1,199 Inclusive.	\$1,200-\$1,299 Inclusive.	\$1,300-\$1,399 Inclusive.	\$1,400-\$1,499 Inclusive.	\$1,500-\$1,749 Inclusive.	\$1,750-\$1,999 Inclusive.	\$2,000-\$2,499 Inclusive.	\$2,500-\$2,999 Inclusive.	\$3,000 and over.	Totals
0.....	2	4	1	1	1	1	1	6	3	1	1	1	1	1	11
1.....	19	130	38	25	5	6	8	14	5	6	1	1	1	1	244
2.....	4	249	43	29	17	11	6	12	5	8	4	1	1	1	384
3.....	1	98	211	26	32	11	16	4	10	6	7	3	1	1	424
4.....	1	26	226	44	19	1	7	8	5	17	8	3	1	1	350
5.....	1	16	64	99	18	10	11	4	5	17	8	3	1	1	260
6.....	1	9	22	124	36	12	8	3	2	10	5	2	1	1	234
7.....	1	5	15	69	57	13	11	13	7	10	10	5	1	1	215
8.....	2	1	15	26	103	33	8	18	2	2	10	8	1	1	228
9.....	1	1	10	30	65	54	21	25	3	9	11	2	1	1	231
10.....	1	1	9	18	21	42	55	48	9	7	10	6	3	1	229
11.....	1	1	6	35	13	18	70	59	10	6	7	3	1	1	229
12.....	1	1	2	21	20	18	98	118	16	11	9	6	1	1	322
13.....	1	1	1	9	13	15	33	66	8	13	7	4	1	1	168
14.....	1	1	1	8	6	4	30	53	13	5	10	2	1	1	134
15.....	1	1	1	7	3	12	35	85	15	7	1	15	4	1	185
16.....	1	1	1	4	11	11	54	130	17	8	2	13	2	2	255
17.....	1	1	1	3	8	10	48	122	10	13	3	4	4	1	226
18.....	1	1	1	3	8	8	40	137	21	7	4	8	9	1	246
19.....	1	1	1	4	5	4	32	111	16	10	1	8	2	1	194
20.....	1	1	1	4	2	5	36	115	23	12	4	10	8	1	220
21.....	1	1	1	3	2	4	53	144	30	8	2	7	5	1	258
22.....	1	1	1	1	4	2	35	105	16	16	3	6	5	1	193
23.....	1	1	1	4	5	1	22	74	15	14	4	4	5	1	144
24.....	1	1	1	5	1	4	25	92	17	15	4	5	4	3	175
25.....	1	1	1	2	1	4	25	95	20	19	4	6	1	3	181
26.....	1	1	1	1	1	1	22	91	10	21	1	3	5	5	161
27.....	1	1	1	1	1	1	17	85	11	14	2	5	10	3	149
28.....	1	1	1	1	1	1	28	54	9	13	5	5	5	2	119
29.....	1	1	1	1	1	1	9	54	11	14	3	3	2	4	97
30.....	1	1	1	3	5	5	5	37	9	12	3	4	1	6	80
31.....	1	1	1	1	1	1	13	34	8	14	1	1	1	7	81
32.....	1	1	1	1	1	1	13	39	4	11	1	1	2	6	76
33.....	1	1	1	2	1	1	9	26	4	7	1	2	2	6	60
34.....	1	1	1	1	1	1	3	12	3	8	1	1	1	8	36
35.....	1	1	1	1	1	1	7	13	5	6	1	2	1	6	39
36.....	1	1	1	1	1	1	2	9	4	7	1	1	1	3	26
37.....	1	1	1	1	1	1	1	14	1	6	1	1	1	4	25
38.....	1	1	1	1	1	1	1	10	3	7	1	1	2	8	33
39.....	1	1	1	1	1	1	1	5	1	1	1	1	1	1	10
40.....	1	1	1	1	1	1	1	6	1	1	1	1	1	2	12
41.....	1	1	1	1	1	1	1	6	1	2	1	1	1	4	14
42.....	1	1	1	1	1	1	1	6	1	3	1	1	1	5	19
43.....	1	1	1	1	1	1	1	3	1	5	1	1	1	1	11
44.....	1	1	1	1	1	1	1	1	1	1	1	2	1	1	3
45.....	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6
46.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
47.....	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3
48.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
49.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
50.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
51.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
52.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals.....	33	539	665	609	488	319	929	2,165	382	394	125	167	91	104	7,010

TABLE LXXXV.—(Chicago Teachers, Male).

SHOWING THE NUMBER AND SALARIES OF MALE TEACHERS IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE.

Years of service	Less than \$1,000	\$1,000- \$1,249 Inclusive	\$1,250- \$1,499 Inclusive	\$1,500- \$1,749 Inclusive	\$1,750- \$1,999 Inclusive	\$2,000- \$2,499 Inclusive	\$2,500- \$2,999 Inclusive	\$3,000- \$3,499 Inclusive	\$3,500 and over	Totals
0.....	2	1	1							4
1.....	6	9	12	7						34
2.....	6	17	17	4	1					45
3.....	6	18	10	7	10	3				54
4.....	3	12	12	3	6					36
5.....	1	4	6	5	8	3				27
6.....	2	5	3	9	11	3				33
7.....	1	1	7	7	10	8		1		35
8.....	5	2	3	4	5	6	2			27
9.....		2	1	4	4	6			1	18
10.....	1			2	1	2	2		1	9
11.....		1	1	2	4	4	3	2		17
12.....	1	1	1	2	3	6	4	3		21
13.....			1	3	6	4	3		2	19
14.....			1	4		8	5	1	1	20
15.....	1		1	2	7	6	8	1	1	27
16.....		2	1	4		9	5	2	3	26
17.....	1		1	1		13	5	2	2	25
18.....	1	1	2	1	1	5	7	4		22
19.....		2	1	1	1	5	5	4		19
20.....			2	1		4	10	4	5	26
21.....			5	3	1	1	4	2	3	19
22.....			2	1	1	5	8	6	4	27
23.....			1	1		3	5		1	11
24.....		1	1	1	1	2	4	4	3	17
25.....			1	4		3	6	2	3	19
26.....		1	1	1		3	2	4	7	19
27.....			2			1	2	1	6	12
28.....			1			2	1	1	5	10
29.....			1	2		2			7	13
30.....								1	6	7
31.....			1						4	5
32.....						1			4	5
33.....				1	1		1		3	6
34.....									4	4
35.....			1						1	2
36.....										
37.....			1						3	4
38.....		1							2	3
39.....							2		3	5
40.....									1	1
41.....									1	1
42.....									5	5
43.....										
44.....									1	1
45.....							1			1
46.....									1	1
47.....									2	2
Totals.....	37	81	102	87	82	118	96	45	96	744

TABLE LXXXVI.—(Chicago Teachers, Female).

SHOWING THE NUMBER OF CHICAGO FEMALE TEACHERS IN ACTIVE SERVICE, JANUARY 1, 1916
CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1,
1916.

Ages Inclusive	Years of service											Totals
	0-4 Years inclusive	5-9 Years inclusive	10-14 Years inclusive	15-19 Years inclusive	20-24 Years inclusive	25-29 Years inclusive	30-34 Years inclusive	35-39 Years inclusive	40-44 Years inclusive	45-49 Years inclusive	50-52 Years inclusive	
20-24.....	694	21	25	.....	.....	.....	.....	.....	.....	.....	.....	715
25-29.....	482	622	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,129
30-34.....	108	276	429	25	.....	.....	.....	.....	.....	.....	.....	838
35-39.....	62	105	380	538	49	.....	.....	.....	.....	.....	.....	1,134
40-44.....	42	63	124	320	559	61	.....	.....	.....	.....	.....	1,169
45-49.....	19	52	86	119	210	434	46	.....	.....	.....	.....	966
50-54.....	5	22	26	64	114	124	195	20	.....	.....	.....	570
55-59.....	1	5	9	29	40	58	67	95	10	.....	.....	314
60-64.....	.....	2	1	10	13	22	19	16	40	2	.....	125
65-69.....	.....	.....	1	1	4	6	5	.....	4	2	.....	29
70-74.....	.....	.....	.....	.....	1	2	.....	2	4	.....	3	17
75-77.....	.....	.....	.....	.....	.....	.....	1	.....	1	3	.....	4
Totals.....	1,413	1,168	1,082	1,106	990	707	333	133	59	16	3	7,010

TABLE LXXXVII.—(Chicago Teachers, Male).

SHOWING THE NUMBER OF CHICAGO MALE TEACHERS IN ACTIVE SERVICE, JANUARY 1, 1916
CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1, 1916.

Ages inclusive	Years of Service										Totals
	0-4 Years inclusive	5-9 Years inclusive	10-14 Years inclusive	15-19 Years inclusive	20-24 Years inclusive	25-29 Years inclusive	30-34 Years inclusive	35-39 Years inclusive	40-44 Years inclusive	45-47 Years inclusive	
21-24.....	27	1	.....	.....	.....	.....	.....	.....	.....	.....	28
25-29.....	41	21	.....	.....	.....	.....	.....	.....	.....	.....	62
30-34.....	48	38	8	3	.....	.....	.....	.....	.....	.....	97
35-39.....	24	27	27	26	.....	.....	.....	.....	.....	.....	104
40-44.....	20	21	10	47	12	.....	.....	.....	.....	.....	110
45-49.....	9	17	18	20	29	15	.....	.....	.....	.....	108
50-54.....	4	13	16	14	24	23	6	.....	.....	.....	100
55-59.....	.....	1	6	2	24	27	11	2	.....	.....	77
60-64.....	.....	1	.....	2	6	5	5	2	2	.....	29
65-69.....	.....	.....	1	1	3	2	5	1	4	2	19
70-74.....	.....	.....	.....	.....	2	1	.....	2	2	2	9
75-78.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Totals.....	173	140	86	119	100	73	27	14	8	4	744

TABLE LXXXVIII.—(Chicago Teachers, male and female).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1907, THE TOTAL ASSETS JANUARY 1, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		Amount deducted from teachers' salaries	Total	To pensioners	To pensioners	Other than to pensioners	Total		
Jan. 1, 1907 to Jan. 1, 1908.....	\$ 94,536 16	\$ 52,140 74	\$ 22,957 65	\$ 75,098 39	\$ 40,190 74	\$ 3,834 06	\$ 44,024 80	\$ 31,073 59	299
Jan. 1, 1908 to Jan. 1, 1909.....	125,609 75	92,770 15	30,738 28	123,508 43	63,082 31	2,633 77	65,716 08	57,792 35	326
Jan. 1, 1909 to Jan. 1, 1910.....	183,402 10	93,243 25	70,946 99	164,190 24	60,372 96	11,436 75	71,809 71	92,380 53	330
Jan. 1, 1910 to Jan. 1, 1911.....	275,782 63	97,168 00	72,628 78	169,796 78	59,790 15	11,201 01	70,991 16	98,797 62	361
Jan. 1, 1911 to Jan. 1, 1912.....	374,580 25	100,805 00	78,119 73	178,924 73	78,234 37	7,046 42	85,280 79	93,643 94	393
Jan. 1, 1912 to Jan. 1, 1913.....	468,294 19	112,942 98	185,454 69	298,397 67	104,378 11	11,792 64	116,170 75	182,226 92	408
Jan. 1, 1913 to Jan. 1, 1914.....	650,451 11	117,642 61	149,527 72	267,170 33	147,960 77	9,413 11	157,373 88	109,796 45	459
Jan. 1, 1914 to Jan. 1, 1915.....	760,247 56	124,411 47	154,505 77	278,917 24	176,933 30	8,200 86	185,134 16	93,783 08	495
Jan. 1, 1915 to Jan. 1, 1916.....	854,030 64	129,875 55	249,444 76	379,320 31	191,716 91	11,062 40	202,779 31	176,541 00	544
Jan. 1, 1916.....	1,030,571 64								

The bonds are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE LXXXIX.—(Municipal Employees, male and female).

SHOWING THE NUMBER IN ACTIVE SERVICE JANUARY 1, 1916, CLASSIFIED IN GROUPS ACCORDING TO OCCUPATIONS AND AGES ON THAT DATE.

Age	Occupations, male						Occupations, female		Age	Occupations, male						Occupations, female	
	A	B	C	D	E	F	G	H		A	B	C	D	E	F	G	H
19.....	1								53.....	91	27		0	5		7	6
20.....	0								54.....	78	29		0	3		7	3
21.....	6								55.....	84	23		1	3		5	4
22.....	22				1		2		56.....	70	27		2	3		4	3
23.....	55	2			1		5		57.....	72	17	1		3		3	5
24.....	64	2			0		16		58.....	55	17			1		2	5
25.....	85	7		1	3		11	1	59.....	55	19			1		1	3
26.....	124	12			0		13	0	60.....	48	16			3		2	5
27.....	94	6		1	1		13	0	61.....	38	14			0		1	3
28.....	98	13			5		21	0	62.....	34	20			1		2	2
29.....	110	15		3	7		21	0	63.....	44	13					0	1
30.....	117	9	1	1	10	1	17	1	64.....	23	9					0	4
31.....	124	14	1	3	15		21	0	65.....	17	4			1		0	0
32.....	128	15	2	6	20		9	0	66.....	18	5					0	1
33.....	108	13		3	12	1	12	0	67.....	11	5			1		0	0
34.....	128	12		0	8		14	2	68.....	18	9					0	1
35.....	102	13		5	14		14	1	69.....	11	2			1		1	1
36.....	111	18	1	1	13		20	4	70.....	6	2					1	
37.....	94	21	1	1	15	1	16	2	71.....	7	5			1		0	
38.....	104	20	1	4	14		18	3	72.....	2	2					1	
39.....	103	12		1	8	1	15	2	73.....	6	2					0	
40.....	99	23		2	7	2	17	5	74.....	4	1					0	
41.....	92	19	1	3	5		20	5	75.....	5	3					1	
42.....	91	21		3	9		18	4	76.....	0	0					1	
43.....	91	23		4	5	2	13	5	77.....	3	0						
44.....	100	20	1	1	12	2	17	8	78.....	3	0						
45.....	83	23	1	2	12		10	5	79.....	0	1						
46.....	122	28		2	7		22	1	80.....	1							
47.....	104	31	1	1	4		8	10	81.....	1							
48.....	106	26		0	7		10	8	82.....	2							
49.....	104	31	1	2	9		11	5	83.....	0							
50.....	80	21	1	1	9		13	1	84.....	1							
51.....	97	32		0	7	1	2	6									
52.....	83	38	1	1	7		6	6	Totals	3,836	812	16	54	273	12	469	132

¹The types of occupations included are:

Column (A). Such as clerks, stenographers, bookkeepers, accountants, auditors, draftsmen, physicians, health officers, engineers (technical), secretaries, punch and machine operators, cashiers, statisticians, inspectors (boiler, brick, gas, paving, building, material, waterpipe, plumbing, ventilation, etc.), superintendents (ward, bridge, construction, machinery, medical, etc.), foremen (carpenter, repair shop, section, pipe yards, etc.), machinists, carriage painters or trimmers, linotype operators, meter testers, pattern makers.

Employees in these classes pay the regular insurance premium rates.

Column (B). Such as janitors, hostlers, stationery firemen, oilers and operating engineers, brass workers, laborers (common, where no special hazard exists).

Employees in these classes are rated from \$2.25 to \$6.00 higher per \$1,000 of insurance, varying with age at which insurance is taken.

Column (C). Underground workers.

Employees in this class are rated from \$9 to \$50 higher per \$1,000 of insurance, varying with age at which insurance is taken.

Column (D). Such as electrical mechanics, their helpers and foremen, harbor policemen.

Employees in these classes are rated from \$0 to \$2.50 higher per \$1,000 of insurance, without regard to age at which insurance is taken.

Column (E). Such as linemen and their foremen (coming in contact with live wires), telegraph repairers, cable splicers, arc lamp trimmers and repairers, structural iron workers, bridge carpenters and painters, window washers.

Employees in these classes are rated from \$5.00 to \$7.50 higher per \$1,000 of insurance, without regard to age at which insurance is taken.

Column (F). Such as electrical repairers on high tension lines, caisson workers.

Employees in these classes are not insurable.

Column (G). Such as stenographers, clerks, punch and machine operators, cashiers, librarians, nurses, health officers.

Employees in these classes pay the regular insurance premium rates.

Column (H). Such as janitresses, laundresses.

Employees in these classes are rated from \$2.25 to \$6.00 higher per \$1,000 of insurance, varying with age at which insurance is taken.

TABLE XC.—(Municipal Employees, male).

SHOWING THE NUMBER AND SALARIES OF EMPLOYEES IN ACTIVE SERVICE ON JANUARY 1, 1916,
CLASSIFIED BY YEARS OF SERVICE.

Years of Service	\$300-\$399 Inclusive.	\$400-\$499 Inclusive.	\$500-\$599 Inclusive.	\$600-\$699 Inclusive.	\$700-\$799 Inclusive.	\$800-\$899 Inclusive.	\$900-\$999 Inclusive.	\$1,000-\$1,099 Inclusive.	\$1,100-\$1,199 Inclusive.	\$1,200-\$1,299 Inclusive.	\$1,300-\$1,399 Inclusive.	\$1,400-\$1,499 Inclusive.	\$1,500-\$1,749 Inclusive.	\$1,750-\$1,999 Inclusive.	\$2,000-\$2,499 Inclusive.	\$2,500-\$2,999 Inclusive.	\$3,000-\$3,499 Inclusive.	\$3,500-\$3,999 Inclusive.	\$4,000 and over.	Totals.
0.					3	3		3						5	1					16
1.			3	4	14	87	38	77	2	36		9	52	37	11	4	5	2	1	391
2.	3	1	3	12	19	94	155	88	7	97	16	13	106	57	10	2				684
3.				4	9	41	59	36	2	45	49	4	51	22	25	2	2		1	352
4.			1	1	1	50	28	35	5	24	37	5	68	17	15	3				292
5.		1		1	4	57	27	46	8	57	38	10	32	11	6	1	1	1	2	303
6.						17	8	17	2	37	16	7	43	10	4	1	1			163
7.				1	2	14	10	13	1	64	18	2	46	19	7			1	2	200
8.				1	1	19	22	14	1	84	27	6	50	25	14	3		2	3	272
9.				1	1	23	30	22	2	88	34	9	94	45	22	2	1	2	1	377
10.				1	2	10	13	11	1	57	20	11	68	40	16	4	1		2	257
11.			1	1	1	9	1	9		32	16	1	59	23	17	3		1		174
12.						5	11	6	1	21	12	3	34	21	3			1	2	120
13.					2	3	6	8	2	12	8		17	6	4					69
14.					1	3	7	4		13	4	1	8	6	2		2	1		52
15.			1			3	8	5		15	4		19	8	8		3			75
16.				3	2	8	12	7	1	34	8	2	35	14	6	1	2	4		139
17.				1		7	6	9		8	10	3	24	15	11	3			1	100
18.					5	12	38	17	2	62	37	7	63	39	38	7	3	2		332
19.					3	2	12	8		20	21	3	19	28	22	3	2	2	4	149
20.					2	3	6	4	1	4	4	1	17	8						57
21.			1		2	4	10	3	1	19	9		20	9	18					92
22.					4	3	7	1	1	8	7		15	8	4			1		59
23.					4	5	8	4		8	5		12	4	7	4	1			62
24.				1	1	1	5	7			5		9	4	1					34
25.					1		4	3	1	8	2	1	8	5	2			1	1	37
26.		1				1	4	1		5	5	1	2	6	4					30
27.						1	6	1		3	4		6	6		2	1	1	1	32
28.					1		2	3		4	1		3							14
29.				1				1		2	3		4							11
30.					1		3			1	3		4					1		13
31.			1			1	1			2				1	1					7
32.						1	1			1	1			2	1					2
33.							2													7
34.					2						2				1					5
35.									1											2
36.						1	2	1							1					5
37.											1									1
38.					1		1			1										2
39.							1	1		1	1									4
40.												1								
41.													1							2
42.				1			1			1										2
43.									1				1							1
44.											1									2
45.														1						
46.																				
47.																				
48.																				
49.																				
50.															1					
51.																				1
Totals...	3	3	11	33	92	484	555	465	41	874	440	100	994	498	291	46	27	22	24	5,003

TABLE XCI.—(Municipal Employees, female).

SHOWING THE NUMBER AND SALARIES OF EMPLOYEES IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE.

Years of Service	\$300- \$399 Inclusive	\$400- \$499 Inclusive	\$500- \$599 Inclusive	\$600- \$699 Inclusive	\$700- \$799 Inclusive	\$800- \$899 Inclusive	\$900- \$999 Inclusive	\$1,000- \$1,249 Inclusive	\$1,250- \$1,499 Inclusive	\$1,500 and over	Totals
0						2			2	1	5
1		7	8	6	12	12	37	5	4	7	98
2	1	3	5	7	12	19	42	2	1	2	94
3	1	2	3	4	4	2	15	13	1	1	46
4			8	11	4	3	4	15	3	1	49
5		3	4	4	31	1	4	18	4		69
6				1	1	1	11	15	2		31
7			2		3		3	13	4		25
8			3	4	1		2	10	1	2	23
9			3	2	2		7	2	1	2	19
10			1		4		1	3	1	1	11
11				1	1		1				3
12					2		1				4
13		1						1			2
14			1	2	2			5		1	11
15			3		5		3	10			21
16		1	2	11				3		2	19
17			1	2			1	2		1	7
18		1	3	2	2				1	3	12
19		1	1	1	1		1	1		3	8
20		1	1	2		1	2	2	1	1	11
21		2		1	1		3	2		1	10
22			2	1	1	1	1				6
23			3	1			1				5
24						1					1
25					1		1				2
26							2				2
27							1	2			3
28											
29			1		1						2
30											
31											
32											
33							1				1
34											
35											
36			1								1
Totals	2	23	56	63	90	43	145	124	26	29	601

TABLE XCII.—(Municipal Employees, Male and Female).

SHOWING THE NUMBER OF EMPLOYEES BOTH MALE AND FEMALE IN ACTIVE SERVICE JANUARY 1, 1916, CLASSIFIED IN GROUPS ACCORDING TO YEARS OF SERVICE AND AGES AS OF JANUARY 1, 1916.

Ages inclusive	Years of Service										Totals
	0-4 Years inclusive	5-9 Years inclusive	10-14 Years inclusive	15-19 Years inclusive	20-24 Years inclusive	25-29 Years inclusive	30-34 Years inclusive	35-39 Years inclusive	40-44 Years inclusive	45-49 Years inclusive	
-19	1										1
20-24	156	27									183
25-29	548	110	6								664
30-34	444	300	79	5							828
35-39	327	288	131	26	2						774
40-44	224	255	124	115	30						750
45-49	164	217	135	204	60	17					797
50-54	96	137	108	204	80	38	3	1			667
55-59	51	92	71	152	75	28	17	2	1		489
60-64	14	48	38	85	53	32	6	6	1		283
65-69	2	6	8	40	29	10	4	2	3	2	106
70-74		2	2	22	5	3	2	3	1		40
75-79			1	7	3	3	2	1			17
80-84				2			1		1	1	5
Totals	2,027	1,482	703	862	337	133	35	15	7	2	5,004

TABLE XCIII.—(Municipal Employees, Male and Female).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS FROM THE TIME FUND WAS CREATED, THE TOTAL ASSETS JANUARY 1, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From employees		Total	To pensioners	Other than to pensioners	Total		
July 1, 1911 to Dec. 31, 1911.....	.....	\$ 45,147 90	\$ 147 17	\$ 45,295 07	Pensions were not paid before July 1, 1916	\$ 1,251 68	\$ 44,043 39	Pensions were not paid before July 1, 1916
Jan. 1, 1912 to Dec. 31, 1912....	44,043 39	103,791 30	3,045 97	106,837 27		3,008 60	103,828 67		
Jan. 1, 1913 to Dec. 31, 1913....	147,872 06	104,599 99	7,167 82	111,767 81		2,112 71	109,655 10		
Jan. 1, 1914 to Dec. 31, 1914....	257,527 16	116,345 43	9,836 41	126,181 84		3,988 41	122,193 43		
Jan. 1, 1915 to Dec. 31, 1915....	379,720 59	134,127 22	23,812 65	157,939 87		11,978 60	145,961 27		
Jan. 1, 1916.....	525,681 86								

The bonds are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE XCIV.—(Illinois State Teachers, Male and Female).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER OF PUBLIC SCHOOL TEACHERS IN THE STATE OF ILLINOIS OUTSIDE OF THE CITIES OF CHICAGO AND PEORIA.

Age	Number from data of 94 counties	Calculated number in State	Age	Number from data of 94 counties	Calculated number in State
17.....	24	30	50.....	135	167
18.....	202	249	51.....	91	112
19.....	1,153	1,422	52.....	89	110
20.....	1,767	2,179	53.....	85	105
21.....	1,883	2,322	54.....	82	101
22.....	1,825	2,250	55.....	91	112
23.....	1,646	2,030	56.....	83	102
24.....	1,408	1,736	57.....	73	90
25.....	1,193	1,471	58.....	54	67
26.....	1,105	1,363	59.....	30	37
27.....	874	1,078	60.....	28	35
28.....	766	945	61.....	27	33
29.....	664	819	62.....	27	33
30.....	589	726	63.....	23	28
31.....	528	651	64.....	13	16
32.....	481	593	65.....	13	16
33.....	416	513	66.....	11	14
34.....	319	393	67.....	8	10
35.....	335	413	68.....	12	15
36.....	306	377	69.....	2	2
37.....	275	339	70.....	4	5
38.....	260	320	71.....	1	1
39.....	240	296	72.....	1	1
40.....	241	297	73.....	1	1
41.....	238	294	74.....	2	2
42.....	206	254	75.....		
43.....	174	215	76.....		
44.....	172	212	77.....	1	1
45.....	196	242	78.....		
46.....	186	229	79.....	1	1
47.....	148	183			
48.....	142	175			
49.....	135	167			
			Totals.....	21,085	26,000

TABLE XCV.—(Illinois State Teachers, Male and Female).

SHOWING THE NUMBER AND SALARIES OF PUBLIC SCHOOL TEACHERS IN THE STATE OF ILLINOIS OUTSIDE OF THE CITIES OF CHICAGO AND PEORIA IN ACTIVE SERVICE ON JANUARY 1, 1916, CLASSIFIED BY YEARS OF SERVICE. (Basis of 21,035 teachers).

Years of service	\$100- \$199 Inclusive	\$200- \$299 Inclusive	\$300- \$399 Inclusive	\$400- \$499 Inclusive	\$500- \$599 Inclusive	\$600- \$699 Inclusive	\$700- \$799 Inclusive	\$800- \$899 Inclusive	\$900- \$999 Inclusive	\$1,000- \$1,249 Inclusive	\$1,250- \$1,499 Inclusive	\$1,500- \$1,999 Inclusive	\$2,000 and over	Totals
1 ¹	52	535	928	1,038	286	153	79	49	30	34	5	3	2	3,194
2.....	13	283	803	1,149	345	151	100	55	36	36	3	1	4	2,979
3.....	9	135	537	1,011	341	158	99	40	32	45	8	2	4	2,421
4.....	2	81	345	731	293	149	84	57	43	55	13	7	2	1,862
5.....	2	67	233	598	304	184	75	46	33	53	16	11	2	1,624
6.....	2	35	134	411	217	125	73	63	26	44	11	9	3	1,153
7.....	2	20	123	301	221	114	69	50	24	35	11	9	4	983
8.....	20	84	260	156	124	76	49	20	45	27	6			867
9.....	15	65	204	133	98	46	37	23	34	16	16			687
10.....	13	51	162	112	93	52	45	25	30	10	11	6		610
11.....	13	28	123	99	71	49	45	20	25	14	10			497
12.....	2	7	33	108	98	68	48	34	12	36	13	6	7	472
13.....	1	25	82	57	59	38	37	10	18	11	10	4		352
14.....	3	21	62	55	41	41	29	18	19	9	8	3		309
15.....	2	22	63	54	48	34	23	17	20	10	5	8		306
16.....	1	3	15	48	54	51	28	20	15	14	5	8	9	271
17.....	2	12	48	51	42	16	24	10	16	5	6	3		235
18.....	1	12	39	44	22	18	17	12	13	9	12	1		200
19.....		9	27	40	35	22	20	18	16	3	12	5		207
20.....	1	4	12	44	33	29	11	17	15	11	3	6	9	195
21.....		4	5	32	28	35	14	17	12	18	2	5	3	175
22.....	1	0	9	26	22	23	12	10	19	11	4	9	8	154
23.....	1	6	32	22	28	12	13	12	18			4	6	154
24.....		3	9	32	19	30	14	8	8		4	8	4	153
25.....	1		9	42	25	35	16	27	17	18	7	6	3	206

¹This includes all those having one year and under.

TABLE XCV.—Concluded.

Years of service	\$100- \$199 Inclusive	\$200- \$299 Inclusive	\$300- \$399 Inclusive	\$400- \$499 Inclusive	\$500- \$599 Inclusive	\$600- \$699 Inclusive	\$700- \$799 Inclusive	\$800- \$899 Inclusive	\$900- \$999 Inclusive	\$1,000- \$1,249 Inclusive	\$1,250- \$1,499 Inclusive	\$1,500- \$1,999 Inclusive	\$2,000 and over	Totals
26.....		2	3	18	19	17	13	15	9	9	5	4	2	116
27.....		1	7	12	18	13	11	9	5	8	3	5	1	93
28.....		1	2	12	8	10	6	7	3	10	3		3	63
29.....	1	2	2	14	12	14	14	3	5	4		7	1	79
30.....		1	5	17	17	12	8	11	6	4	1	4	1	87
31.....	1			3	10	9	5	2	4	11	3	2		50
32.....				1	12	7	8	4	3	8	2	3	4	59
33.....		1	2	1	6	9	4	2	2	2		1	2	38
34.....			3	7	5	5	8	1	2	5	1	1	2	40
35.....				5	8	8	7	4		5		4	4	45
36.....		1	1	3	7	7	2	1	2	1	2	1		28
37.....			3	2		3	5	2	4	2		1	1	23
38.....				1	1	4	4	2	1	2		2		17
39.....						3	3	2	2	1		1	1	11
40.....		1		3	4	7	3	2	2	1		1	1	24
41.....			2	1	1	3		2	1	1			1	11
42.....		1	1	2	2	1		2					2	9
43.....			1				1	1	1					4
44.....				1		2			2			1		6
45.....						1	1	1				1		3
46.....					1		1							2
47.....			1		1	1				1				4
48.....						1	1							2
49.....														0
50.....					1				1					2
51.....														
52.....			1									1		2
53.....														0
54.....								1						0
55.....														1
Totals..	91	1,258	3,563	6,785	3,236	2,102	1,230	912	561	753	239	229	126	21,085

TABLE XCVI.—(Illinois State Teachers, male and female).

SHOWING THE NUMBER AND SALARIES OF TEACHERS IN ACTIVE SERVICE ON JANUARY 1, 1916,
WHO HAVE 25 YEARS OR MORE SERVICE TO THEIR CREDIT, AND ARE 50 YEARS, OR MORE,
OF AGE ON THAT DATE; CLASSIFIED BY AGES AS OF SAME DATE (BASIS OF 21,085 TEACHERS).

Age	\$100- \$199 Inclusive	\$200- \$299 Inclusive	\$300- \$399 Inclusive	\$400- \$499 Inclusive	\$500- \$599 Inclusive	\$600- \$699 Inclusive	\$700- \$799 Inclusive	\$800- \$899 Inclusive	\$900- \$999 Inclusive	\$1,000- \$1,249 Inclusive	\$1,250- \$1,499 Inclusive	\$1,500- \$1,999 Inclusive	\$2,000 and over	Totals
50.....	1		2	11	17	12	10	9	6	4	3	7		82
51.....			3	7	6	7	10	6	1	7	3	5		58
52.....	1		3	11	5	7	6	3	2	5	3	4	3	53
53.....			2	6	13	7	7	7	2	5	2			51
54.....			3	6	4	9	7	4	3	5	3		4	51
55.....		1	1	14	7	7	8	3	3	7	1	5	4	63
56.....		2		13	7	14	14	6	7	5	3	3		69
57.....			1	11	9	9	5	5	7	6	1	4	1	59
58.....			2	7	3	11	4	5	6	5		1	2	46
59.....			2	4	5	3	2	3	1	3		2	1	27
60.....			1	1	3	9	2	3	1	2				22
61.....		1	1		4	4	1	1	1	3	1		3	20
62.....	1		1	2	4	3	1	1	3		1	2		23
63.....			1		3	3	3	3	1	1				18
64.....		1		2	2	1	1	1	1	1				11
65.....		1	2	1	2	2	1		1	1				10
66.....			1	1	2	2	1	1		1			1	10
67.....			2			1	1	1	1	1				7
68.....				1	2		2		1	1	1	1		9
69.....			1					1						2
70.....				1	1							1	1	4
71.....														
72.....						1								1
73.....								1						1
74.....			1											1
75.....														
76.....														
77.....												1		1
Totals..	3	7	31	104	99	117	86	64	43	63	23	39	20	699

TABLE XCVII.—(Illinois State Teachers, Male and Female.)

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR PERIODS INDICATED THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD, THE EXCESS OF RECEIPTS OVER DISBURSEMENTS, AND THE NUMBER OF PENSIONERS ON ROLL.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From teachers	Other sources	Total	To pensioners	Other disbursements	Total		
Nov. 11, 1915 to Dec. 30, 1915...	...	\$ 31,653 31	\$ 13,436 66	\$ 50,144 97	\$ 300 00	\$ 1,539 20	\$ 1,839 20	\$ 48,305 77	...
Dec. 30, 1915 to Sept. 30, 1916...	\$ 48,305 77	\$198,014 20	144,192 60	342,206 80	\$ -26,294 59	7,025 62	33,320 21	308,886 59	339
Sept. 30, 1916.....	357,192 36	.....	.....	.....	.....	.....	.....	.....	.....

¹This includes balances of the Rockford and Oak Park funds.

²This consists of back assessments and interest on same.

³This includes salary deductions (\$33,175.13).

TABLE XCVIII.—(Park Policemen, Chicago).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER IN ACTIVE SERVICE ON THAT DATE

Age	Lincoln Park	South Park	West Park	Age	Lincoln Park	South Park	West Park
25.....		1	2	51.....		7	2
26.....	1	6	2	52.....	1	2	4
27.....	3	6	7	53.....	3	6	6
28.....	2	4	4	54.....	2	3	3
29.....	3	2	7	55.....		3	1
30.....	2	7	4	56.....	2	2	2
31.....	2	3	2	57.....		5	3
32.....	2	5	3	58.....	1	2	3
33.....		11	3	59.....		1	1
34.....		5	4	60.....			2
35.....	5	4	1	61.....	2		
36.....	1	4	4	62.....			1
37.....	2	6	3	63.....		1	
38.....	3	7	1	64.....			1
39.....	1	6	5	65.....			
40.....	1	8	5	66.....	2	2	
41.....	7	8	3				
42.....	2	7	3				
43.....	2	11	4	76.....		1	
44.....	1	10	4				
45.....	1	6	2				
46.....	2	3	3				
47.....	1	7	3				
48.....	2	5	2				
49.....	1	5	5				
50.....	2	5	4				
				Totals	62	187	124

TABLE C.—(Chicago Public School Employees, male and female).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER IN ACTIVE SERVICE ON THAT DATE.

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
20....		1	30....	12	2	40....	10		50....	9	3	60....	4		70....	4	
21....			31....	6	1	41....	5	1	51....	11	2	61....	4		71....	2	
22....		1	32....	6	4	42....	9	1	52....	8	2	62....	5		72....		
23....	3	1	33....	10		43....	5	1	53....	11		63....	8	2	73....	2	
24....	4	2	34....	12		44....	9	1	54....	9		64....	5		74....	1	
25....	6		35....	9	2	45....	12	1	55....	8	2	65....	4	1			
26....	5		36....	7	2	46....	9		56....	14		66....	3				
27....	7	1	37....	5	1	47....	6	1	57....	18		67....	3				
28....	3		38....	4		48....	6	2	58....	6		68....	6				
29....	11	2	39....	9	1	49....	12	2	59....	13	3	69....	1		Totals.	361	46

TABLE CI.—(Chicago Public School Employees, male and female).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER ON PENSION ON THAT DATE.

Age	Service Pensioners		Disability Pensioners		Age	Service Pensioners		Disability Pensioners	
	Male	Female	Male	Female		Male	Female	Male	Female
41....	1				70....	1			1
48....	1				71....	2			
49....					72....	1		1	
50....					73....	2	1		
51....	1				74....	2			
52....					75....	1			
53....				1	76....	2			1
54....		1			77....				
55....					78....		1		
56....					79....	1			
57....	1	1			80....				
58....	1	1			81....	1			
59....	1				82....	1			
60....					83....	1			
61....	1	1							
62....	1								
63....									
64....									
65....	1								
66....	1								
67....	1								
68....									
69....	1				Totals	25	6	1	3

TABLE CII.—(Chicago Public School Employees).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING WITH NOVEMBER 7, 1906, THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Total assets at beginning of period	Receipts during period		Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From salary deductions	Other sources	Total	To pensioners	Other disbursements	Total	
Nov. 7, 1906 to Feb. 25, 1907.....	\$ 52,455 36	\$ 1,957 00	\$ 445 00	\$ 2,402 00	\$ 1,112 87	\$ 21 76	\$ 1,134 63	12
Feb. 25, 1907 to Feb. 3, 1908.....	\$ 57,722 73	7,056 72	3,177 47	10,234 19	4,823 57	1,430 67	6,254 24	17
Feb. 3, 1908 to Oct. 31, 1908.....	57,702 68	5,513 66	2,530 82	7,704 48	4,708 45	1,109 62	5,818 07	18
Oct. 31, 1908 to April 7, 1909.....	59,649 09	3,160 99	5,792 40	8,953 39	3,035 14	1,349 76	4,384 90	22
April 7, 1909 to Oct. 21, 1909.....	64,217 58	3,810 19	3,521 74	7,331 93	4,164 95	1,373 55	4,538 50	22
Oct. 21, 1909 to Nov. 1, 1910.....	67,011 01	8,042 48	9,425 97	17,468 45	9,167 94	1,847 32	11,015 26	27
Nov. 1, 1910 to Nov. 1, 1911.....	73,464 20	10,320 32	9,556 29	19,876 61	11,292 70	1,710 22	13,002 92	29
Nov. 2, 1911 to Nov. 2, 1912.....	80,337 89	10,320 32	9,556 29	19,876 61	13,412 52	969 97	14,382 49	35
Nov. 2, 1912 to Nov. 2, 1913.....	87,581 95	10,675 01	10,951 54	21,626 55	16,873 18	1,345 76	18,218 94	34
Nov. 2, 1913 to Feb. 9, 1914.....	93,435 93	13,453 70	10,619 22	24,072 92	19,067 63	1,915 44	20,983 07	37
Feb. 9, 1914 to April 30, 1915.....	101,927 78	14,150 37	15,324 55	29,474 92	7,433 98	785 27	8,219 25	34
April 30, 1915 to Oct. 30, 1915.....	102,523 26	5,942 95	2,871 78	8,814 73				

The securities are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE CIII.—(House of Correction Employees).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING IN 1911, THE TOTAL ASSETS AT THE BEGINNING OF EACH YEAR, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Total assets at beginning of period	Receipts during period		Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From employees	Other sources	Total	To pensioners	Other disbursements	Total	
July 1, 1911 to Dec. 31, 1911.....	\$ 886 32	\$ 202 01	\$ 1,088 33	\$ 40 00			\$ 1,048 33	1
Dec. 31, 1911 to Dec. 31, 1912.....	1,829 11	3,003 22	4,832 33	920 00			3,912 33	2
Dec. 31, 1912 to Dec. 31, 1913.....	1,835 18	2,584 78	4,419 96	1,480 00			2,935 79	4
Dec. 31, 1913 to Dec. 31, 1914.....	1,951 92	1,084 01	3,035 93	2,280 00		21 66	2,301 66	5
Dec. 31, 1914 to Dec. 31, 1915.....	1,996 81	7,828 12	9,824 93	2,428 28			7,396 65	5
Dec. 31, 1915.....	16,027 37							

The bonds are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE CIV—(House of Correction Employees, male and female).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER IN ACTIVE SERVICE ON THAT DATE.

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
20			30	1	1	40	7		50	2	1	60	1		70		
21			31	4	1	41	2		51	2		61	2		71	1	
22			32	2		42	4		52	1	2	62	1		72		
23			33	1	2	43	3		53	1		63			73	1	
24			34	2		44	1		54	3		64	1		74		
25		1	35	2		45	6	1	55		1	65			75		
26	2		36	2	1	46	2		56			66					
27	1		37	4	1	47	1	1	57	2		67	1				
28	6	2	38	4		48	1		58	2		68					
29	3		39	4		49	1	1	59	1		69			Totals.	88	16

TABLE CV—(Chicago Public Library Employees).

SHOWING BY AGES AS OF JANUARY 1, 1916 THE NUMBER IN ACTIVE SERVICE ON THAT DATE.

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
17	9		30	3	8	40	2	3	50	1	1	60	3		70		
18	14		31		5	41	1	5	51	3	2	61	1		71		
19		1	32	3	5	42	3	3	52	2	2	62			72	1	
20	7	7	33	2	3	43	1	3	53	3	1	63			73		
21	6	12	34		1	44	3	2	54	1	4	64	2		74	1	
22	2	11	35	3	7	45	3	4	55	3	2	65			75		
23		11	36	1	2	46	2	1	56	1		66					
24		5	37	2	4	47	1	1	57		1	67	1				
25	4	8	38	1	3	48	3	1	58		2	68	1				
26	3	8	39	2	1	49	1		59	1		69	1				
27	2	4															
28	2	5															
29		7													Totals	134	156

TABLE CVI—(Chicago Public Library Employees).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1906, THE TOTAL ASSETS ON OCTOBER FIRST, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS, ALSO THE NUMBER OF PENSIONERS.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period				Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From employees	Other sources	Total	To pensioners	For death benefits	Other disbursements	Total		
Nov. 1, 1905 to Oct. 1, 1906										
Oct. 1, 1906 to Oct. 1, 1907	\$ 4,527 35	\$ 909 17	\$ 3,660 87	\$ 4,570 04	\$ 180 00		\$ 42 69	\$ 42 69	\$ 4,527 35	1
Oct. 1, 1907 to Oct. 1, 1908	9,847 37	987 44	4,536 53	5,523 97	840 00		23 95	203 95	5,320 02	2
Oct. 1, 1908 to Oct. 1, 1909	17,151 73	991 56	7,577 22	8,568 78	1,295 00	\$ 390 00	34 42	1,264 42	7,304 36	3
Oct. 1, 1909 to Oct. 1, 1910	27,072 61	1,035 94	10,842 10	11,878 04	1,953 00	500 00	162 16	1,957 16	9,920 88	3
Oct. 1, 1910 to Oct. 1, 1911	38,079 87	1,079 60	11,952 49	13,032 09	1,953 00		71 83	2,024 83	11,007 26	3
Oct. 1, 1911 to Oct. 1, 1912	53,050 93	1,465 28	15,590 25	17,055 53	1,782 50		321 97	2,084 47	14,971 06	4
Oct. 1, 1912 to Oct. 1, 1913	69,341 26	1,924 87	17,463 51	19,398 38	2,135 00	450 00	523 05	3,108 05	16,290 33	5
Oct. 1, 1913 to Oct. 1, 1914	86,427 93	1,866 11	19,211 84	21,077 95	3,160 00	500 00	331 28	3,991 28	17,086 67	7
Oct. 1, 1914 to Oct. 1, 1915	105,712 55	1,934 76	22,051 95	23,986 71	3,736 50		965 59	4,702 09	19,284 62	6
Oct. 1, 1915	128,015 78	2,150 68	24,767 88	26,918 56	3,551 17	420 00	644 16	4,61 33	22,303 23	7

¹The bonds are carried at purchase price.

TABLE CVII—(Peoria Teachers, male and female).

SHOWING BY AGES AS OF JANUARY 1, 1916, THE NUMBER IN ACTIVE SERVICE ON THAT DATE.*

Age	Number	Age	Number	Age	Number	Age	Number	Age	Number	Age	Number
20....	2	30...	12	40...	11	50...	5	60....		70....	1
21....	14	31...	14	41...	9	51...	3	61....	1	71....	1
22....	15	32...	10	42...	6	52...	5	62....	1	72....	
23....	24	33...	11	43...	13	53...	4	63....	1	73....	
24....	16	34...	9	44...	7	54...	6	64....		74....	1
25....	15	35...	8	45...	4	55...	5	65....	1	75....	
26....	8	36...	7	46...	10	56...	1	66....			
27....	14	37...	14	47...	9	57...	2	67....	1		
28....	15	38...	8	48...	6	58...	4	68....	1		
29....	13	39...	8	49...	8	59...	2	69....	1	Total	*367

*Of the 437 teachers, the remainder failed to answer.

TABLE CVIII—(Peoria Teachers).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING SEPTEMBER 25, 1911, THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From teachers	¹ Other sources	Total	To pensioners	¹ Other than to pensioners	Total	
Sept. 25, 1911—									
Aug. 1, 1912....			\$5,429 50	\$ 88 25	\$ 5,517 75				\$5,517 75
Aug. 1, 1912—									
Aug. 1, 1913....		\$ 5,517 75	5,718 00	225 17	5,943 17		\$231 81	\$231 81	5,711 36
Aug. 1, 1913—									
Aug. 1, 1914....	3	11,229 11	7,715 42	2,397 12	10,112 54	\$440 00	406 39	846 39	9,266 15
Aug. 1, 1914—									
Aug. 1, 1915....	3	20,495 26	6,317 00	4,509 09	10,826 09	600 00	322 78	922 78	9,903 31
Aug. 1, 1915—									
Feb. 4, 1916....	3	30,398 57	2,708 00	443 47	3,151 47	240 00	113 75	353 75	2,797 72
Feb. 4, 1916—	3	33,196 29							

¹The securities are carried at face value the premiums and discounts being included in disbursements and receipts respectively.

TABLE CIX—(Peoria Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING JANUARY 1, 1904 THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From firemen	² Other sources	Total	To pensioners	² Other than to pensioners	Total	
Jan. 1, 1904—									
Feb. 5, 1905....	6	\$28,563 08	\$581 95	\$ 9,227 52	\$ 9,809 47	\$2,314 00	\$1,386 13	\$3,700 13	\$ 6,109 34
Feb. 5, 1905—									
Jan. 6, 1909....		34,672 42							127,126 50
Jan. 6, 1909—									
Jan. 1, 1910....	14	61,798 92	631 05	10,073 54	10,704 59	5,155 00	286 08	5,441 08	5,263 51
Jan. 1, 1910—									
Jan. 1, 1911....	15	67,062 43	685 20	11,089 19	11,774 39	6,352 50	369 71	6,722 21	5,052 18
Jan. 1, 1911—									
Jan. 1, 1913....		72 114 61							111,225 80
Jan. 1, 1913—									
Jan. 1, 1914....	22	83,340 41	789 50	13,144 23	13,933 73	7,997 50	98 53	8,096 03	5,837 70
Jan. 1, 1914—									
Jan. 1, 1915....	21	89 178, 11	814 95	13,936 63	14,751 58	8,370 00	333 58	8,703 58	6,048 00
Jan. 1, 1915—		95,226 11							

¹This is computed from amounts on hand at beginning and end of periods, as receipts and disbursements for this period were not available.²The bonds are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE CX—(Springfield Policemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1912. THE TOTAL ASSETS JANUARY FIRST, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From policemen	¹ Other sources	Total	To pensioners	¹ Other than to pensioners	Total	
Dec. 31, 1911—Dec. 31, 1912				\$8,332 43	\$8,332 43		\$372 50	\$372 50	\$7,959 93
Dec. 31, 1912—Dec. 31, 1913		\$7,959 93			5,149 18		225 00	225 00	4,924 18
Dec. 31, 1913—Dec. 31, 1914	1	12,884 11			7,474 31	\$250 00	258 65	508 65	6,965 66
Dec. 31, 1914—Dec. 31, 1915	2	19,849 77	\$670 59	6,664 57	7,335 16	700 00	225 00	925 00	6,410 16
Jan. 1, 1916	2	26,259 93							

¹The securities are carried at face value the premiums and discounts being included in disbursements and receipts respectively.

TABLE CXI—(Rockford Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1911, THE TOTAL ASSETS JANUARY FIRST, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS, ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during Period			Disbursements during period			Excess of receipts over disbursements
			From firemen	Other sources	Total	To pensioners	Other than to pensioners	Total	
Apr. 10, 1911—Dec. 31, 1911		\$ 4,862 33							
Dec. 31, 1911—Dec. 31, 1912		4,862 33	\$621 60	\$1,617 26	\$2,238 86				\$2,238 86
Dec. 31, 1912—Dec. 31, 1913		7,101 19	673 92	2,215 23	2,889 15				2,889 15
Dec. 31, 1913—Dec. 31, 1914		9,990 34	714 47	2,244 30	2,958 77				2,958 77
Dec. 31, 1914—Dec. 31, 1915	1	12,949 11	787 73	2,401 39	3,189 12	\$90 00		\$90 00	3,099 12
Jan. 1, 1916	1	16,048 23							

TABLE CXII—(Rockford Policemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING IN 1910 THE AMOUNT OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD, AND THE NUMBER OF PENSIONERS AT THE END OF THE PERIOD.

Period	Total assets at beginning of period	Receipts during period			Disbursements during period			Number of pensioners on roll at end of period
		From policemen	¹ Other sources	Total	To pensioners	¹ Other disbursements	Total	
Aug. 5, 1910-Dec. 31, 1910	¹	\$125 28	\$ 1,502 42	\$ 1,627 70	\$ 75 00	\$ 16 50	\$ 91 50	1
Dec. 31, 1910-Dec. 31, 1911		300 88	2,533 54	2,834 42	450 00	1,021 50	1,471 50	1
Dec. 31, 1911-Dec. 31, 1912		306 67	1,066 87	1,373 54	450 00		450 00	1
Dec. 31, 1912-Dec. 31, 1913		321 93	2,672 05	2,993 98	819 95	3,500 00	4,319 95	3
Dec. 31, 1913-Dec. 31, 1914		320 21	623 16	943 37	1,498 92	3,700 00	5,198 92	3
Dec. 31, 1914-Dec. 31, 1915		326 53	10,153 28	10,479 81	5,436 32	5,546 39	10,982 71	6

¹Values of securities were not given making impossible the determination of total assets.

TABLE CXIII—(Decatur Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING MAY, 1910, THE TOTAL ASSETS MAY FIRST, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From firemen	¹ Other sources	Total	To pensioners	¹ Other than to pensioners	Total	
May 1, 1910-									
May 1, 1911...	2	\$ 2,289 26	\$ 325 66	\$ 1,750 87	\$ 2,076 53	\$ 442 25	\$ 36 10	\$ 478 35	\$1,593 18
May 1, 1911-									
May 1, 1912...		3,887 44	306 11	2,282 01	2,588 12	472 50	94 21	566 71	2,021 41
May 1, 1912-									
May 1, 1913...		5,908 85	301 99	2,083 44	2,385 43	441 00	14 30	455 30	1,930 13
May 1, 1913-									
May 1, 1914...		7,838 98	331 54	2,182 13	2,513 67	502 39		502 39	2,011 28
May 1, 1914-									
May 1, 1915...		9,850 26	356 74	1,773 84	2,130 58	582 52		582 52	1,548 06
May 1, 1915-									
May 1, 1916...	3	11,398 32	334 66	2,481 39	2,816 05	749 00		749 00	2,067 05
May 1, 1916-									
May 1, 1916...		13,465 37							

¹The securities are carried at face value the premiums and discounts being included in disbursements and receipts respectively.

²Number of pensioners before May 1, 1916 not furnished us.

TABLE CXIV—(Aurora Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING BY YEARS BEGINNING WITH THE YEAR 1907, THE TOTAL ASSETS JANUARY FIRST, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE YEAR AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From firemen	¹ Other sources	Total	To pensioners	Other than to pensioners	Total	
Dec. 31, 1906-									
Dec. 31, 1907...				\$ 25 00	\$ 25 00				\$ 25 00
Dec. 31, 1907-									
Dec. 31, 1908...		\$ 25 00	\$ 260 07	10 00	270 07				270 07
Dec. 31, 1908-									
Dec. 31, 1909...		295 07	253 58	656 28	909 86		\$ 2 36	\$ 2 36	907 50
Dec. 31, 1909-									
Dec. 31, 1910...		1,202 57	254 71	1,355 21	1,609 92		10 63	10 63	1,599 29
Dec. 31, 1910-									
Dec. 31, 1911...		2,801 86	304 11	1,380 82	1,684 93		4 80	4 80	1,680 13
Dec. 31, 1911-									
Dec. 31, 1912...		4,481 99	366 19	110 00	476 19		11 00	11 00	465 19
Dec. 31, 1912-									
Dec. 31, 1913...		4,947 18	281 72	3,668 54	3,950 26		69 46	69 46	3,880 80
Dec. 31, 1913-									
Dec. 31, 1914...		8,827 98	284 29	2,178 67	2,462 96		44 85	44 85	2,418 11
Dec. 31, 1914-									
Dec. 31, 1915...		11,246 09	190 81	509 06	699 87		4 47	4 47	695 40
Dec. 31, 1915-									
Jan. 1, 1916...		11,941 49							

¹The securities are carried at face value the premiums and discounts being included in disbursements and receipts respectively.

TABLE CXV—(Evanston Firemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING WITH DECEMBER 28, 1912, THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From firemen	Other sources	Total	To pensioners	Other than to pensioners	Total	
Dec. 31, 1912- Dec. 31, 1913		\$ 254 62	\$ 454.20	\$ 2,992 80	\$ 3,447 00		\$4 12	\$ 4 12	\$3,442 83
Dec. 31, 1913- March 31, 1915		3,697 50	449 99	11,752 90	12,202 89				12,202 89
Mar. 31, 1915- Dec. 31, 1915	1	15,900 39	308 55	4,011 36	4,319 91	\$375 00		375 00	3,944 91
Jan. 1, 1916		19,845 30							

¹The bonds are carried at face value, the premiums and discounts being included in disbursements and receipts respectively.

TABLE CXVI—(Evanston Policemen).

FINANCIAL STATEMENT REGARDING THE PENSION FUND—SHOWING FOR VARIOUS PERIODS BEGINNING APRIL 30, 1911, THE TOTAL ASSETS AT THE BEGINNING OF EACH PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

Period	Number of pensioners on roll at end of period	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements
			From policemen	Other sources	Total	To pensioners	Other than to pensioners	Total	
April 30, 1911- April 30, 1912			\$ 96 73	\$ 374 85	\$ 471 58		\$ 105 85	\$ 105 85	\$ 365 73
April 30, 1912- April 30, 1913		\$ 365 73	289 41	6,469 18	6,758 59		173 95	173 95	6,584 64
April 30, 1913- April 30, 1914	3	6,950 37	299 80	5,245 39	5,545 19	1,029 60	64 88	1,094 48	4,450 71
April 30, 1914- Dec. 31, 1914	3	11,401 08	222 25	6,907 90	7,130 15	950 40	49 60	1,000 00	6,130 15
Dec. 31, 1914- Dec. 31, 1915	5	17,531 23	338 56	3,707 65	4,046 21	2,251 65	193 28	2,444 93	1,601 28
Jan. 1, 1916	5	19,132 51							

TABLE CXVII—(Moline and Champaign Policemen).

SHOWING DISBURSEMENTS FOR THE YEAR 1915 AND THE NUMBER OF PENSIONERS ON DECEMBER 31, OF THAT YEAR.

City	Total assets at beginning of period	Receipts during period			Disbursements during period			Excess of receipts over disbursements	Number of pensioners on roll at end of period
		From policemen	Other sources	Total	To pensioners	Other disbursements	Total		
Moline	1	1	1	1	\$1,680 00	1	\$1,680 00	1	4
Champaign	1	1	1	1	420 00	1	420 00	1	1

¹No pension funds accumulated. Pensions are paid from city pay roll.

TABLE CXVIII—(Firemen and Policemen, cities giving statements for one year).

FINANCIAL STATEMENTS REGARDING THE PENSION FUNDS—SHOWING IN EACH CASE FOR A VARYING PERIOD THE TOTAL ASSETS AT THE BEGINNING OF THE PERIOD, THE AMOUNTS OF RECEIPTS AND DISBURSEMENTS DURING THE PERIOD, AND THE EXCESS OF RECEIPTS OVER DISBURSEMENTS; ALSO THE NUMBER OF PENSIONERS.

City	Beneficiaries	Period	Total assets at beginning of period	Receipts During period			Disbursements during period			Number of pensioners on roll at end of period
				From salary deductions	Other sources	Total	To pensioners	Other disbursements	Total	
Peoria.....	Policemen	June 30, 1914, to June 30, 1915. June 30, 1915.....	\$19,841 43 23,009 31	\$745 85	\$5,819 94	\$6,565 79	\$3,269 82	\$ 128 14	\$3,397 96	9
East St. Louis.....	Firemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	* 4,272 16	*	1,323 10	1,323 10	2,705 00	*	*	8
Springfield.....	Firemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	20,639 34 24,745 99	667 64	4,233 61	4,901 25	772 50	22 10	794 60	4
Joliet.....	Firemen	Dec. 29, 1915, to April 25, 1916. April 25, 1916.....	19,717 63 21,201 86	120 05	1,937 50	2,057 55	573 32	0	573 32	3
Joliet.....	Policemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	*	377 63	13,549 76	3,927 39	575 82	*3,405 25	3,981 07	3
Decatur.....	Policemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	*	130 13	1,345 16	1,475 29	259 55	6 25	265 80	1
Aurora.....	Policemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	* 7,724 79	307 58	*	*	147 00	*	147 00	1
Elgin.....	Firemen	Dec. 31, 1915.....	17,702 73							
Bloomington.....	Firemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	17,914 51 23,854 90	327 87	5,622 52	5,940 39	0	0	0	0
Bloomington.....	Policemen	Oct. 27, 1915, to Oct. 27, 1916. Oct. 27, 1916.....	5,328 79 3,766 49	*	*	1,558 03	3,120 33	0	3,120 33	8
Oak Park.....	Firemen	Dec. 31, 1914, to Dec. 31, 1915. Dec. 31, 1915.....	1,148 89 2,432 22	401 37	888 96	1,290 33	0	7 00	7 00	0
Sterling.....	Firemen	Dec. 1, 1914, to Dec. 1, 1915. Dec. 1, 1915.....	961 21 1,096 24	*	370 03	370 03	235 00	0	235 00	10

†The sign (-) indicates excess of disbursements over receipts.

‡This includes disbursements for purchase of securities.

*Taken from comptroller's annual report.

†This includes receipts from sale of securities.

‡Records were not kept prior to this.

*These items were not given, or the information was not complete.

CHAPTER VII.

STATISTICS SHOWING EXTENT OF PRESENT AND POSSIBLE FUTURE PENSION LEGISLATION FOR PUBLIC SERVICE EMPLOYEES IN ILLINOIS.

In this chapter are given tables tending to show the extent of present and possible future pension legislation for public service employees in this State.

Table CXIX was arranged from figures furnished by the Legislative Reference Bureau of Illinois. Mr. Bell, Secretary of this Bureau, to whom the collection of these figures was entrusted, reported that data regarding the number of public service employees, State and local, in this State, not under civil service rules had never been collected in the past; that he was frustrated in getting it in detail for this report, because of the fact that many of those able to furnish the information regarding their own local community failed to reply to the questionnaires he sent out, and that he was, therefore, compelled to make an estimate of the number of such employees, based on the replies he received.

The other tables of this chapter were prepared by our own employees from the records of the State Civil Service Commission. It will be noted that the total number of employees as given in Tables CXXI and CXXIII does not agree with that given in Table CXIX. The reason for this is that certain part-time employees are listed in Table CXIX, but not in Tables CXXI and CXXIII.

TABLE CXIX—(Public Service Employees, Illinois).¹

SHOWING NUMBER OF PUBLIC SERVICE EMPLOYEES IN ILLINOIS, STATE AND LOCAL, UNDER CIVIL SERVICE AND NOT UNDER CIVIL SERVICE, SUB-CLASSIFIED INTO THOSE COVERED BY PENSION LEGISLATION AND THOSE NOT SO COVERED.

(Federal Employees not included).

	Number under civil service		Number not under civil service including elective officials and teachers	
	Covered by pension legislation	Not covered by pension legislation	Covered by pension legislation	Not covered by pension legislation
City of Chicago.....	19,631		8,269	722
State of Illinois.....		5,509		1,011
West Park Commission.....	124	912		
South Park Commission.....	187	1,219		
Lincoln Park Commission.....	62	659		
Sanitary District.....				700
Cook County.....		1,248		2,082
Evanston.....	2 40	100		
Springfield.....	2 88	259		
Peoria.....	2 171		437	
Elgin.....	2 40			
Champaign.....	2 18			
Waukegan.....	2 26			
Joliet.....	2 76			
Aurora.....	2 58			
Streator.....	2 25			
Rockford.....	2 98			
90 cities outside Chicago, including above.....				4,320
101 counties outside of Cook County and teachers outside of Chicago and Peoria.....			26,000	3,700
Totals.....	20,644	9,906	34,706	12,535

¹See Text above.²Police and Fire.

TABLE CXX—(Public Service Employees, Illinois).

LIST OF STATE DEPARTMENTS SHOWING NUMBER OF EMPLOYEES UNDER CIVIL SERVICE IN EACH ON JANUARY 1, 1916.

Department	Number	Department	Number
Accountants, Examiners of Public; University of Illinois; Urbana	4	Health, Board of; Springfield and Chicago....	23
Adjutant General; Springfield.....		Highway Commission; Springfield.....	86
Administration, Board of; Springfield.....	28	Historical Library; Springfield.....	6
Apiaries, Inspector of; Putnam.....		Industrial Board, Chicago.....	26
Appellate Court, First District, Chicago.....		Inheritance Tax Department; Springfield; Chicago.....	8
Appellate Court, Second District; Ottawa.....		Insurance Department; Springfield.....	23
Appellate Court, Third District; Springfield.....		Labor Statistics, Bureau of; Springfield.....	7
Appellate Court, Fourth District; Mt. Vernon.....		Laboratory of Natural History; Urbana.....	
Arbitration, Board of; Springfield.....	1	Land Commission of Kaskaskia, Kaskaskia.....	1
Architects, Examiners of; Chicago.....		Library Extension Commission; Springfield.....	3
Architect, State; Chicago.....		Library, State; Springfield.....	
Attorney General; Springfield and Chicago.....	9	Lieutenant Governor; Springfield.....	
Auditor of Public Accts; Springfield and Chicago.....	1	Lincoln Homestead; Springfield.....	
Barbers' Examiners; Chicago.....	3	Lincoln Monument; Springfield.....	2
Biological Laboratory; Springfield.....		Live Stock Commission; Springfield.....	21
Canal Commission, Illinois and Michigan; Lockport.....	10	Mine Rescue Commission; Springfield, (Head Office).....	1
Charities Commission; Springfield.....	4	Mine Rescue Stations; Benton and La Salle....	10
Civil Service Commission; Springfield and Chicago.....	14	Mining Board; Springfield.....	4
Deportation Department, State; Chicago.....	1	Natural History Museum; Springfield.....	7
Dental Examiners; Springfield.....	2	Normal University; Normal.....	18
Eastern Normal School; Charleston.....	16	Northern Normal School; DeKalb.....	13
Employment Agencies; Licensed; Chicago.....	6	Nurses, Examiners of Registered; Springfield...	1
Entomologist, State; Urbana.....	8	Pardons, Board of; Springfield.....	2
Equalization, Board of; Springfield.....		Park Commission; Ottawa.....	
Executive Department; Springfield.....		Pharmacy, Board of; Springfield.....	6
Factory Inspection; Chicago.....	15	Printing, Superintendent of; Springfield.....	5
Farmers' Institute; Springfield.....	3	Prison industries, Board of; Springfield.....	2
Fire Marshal; Springfield and Chicago.....	32	Public Instruction, Superintendent of; Springfield.....	10
Food Commissioner; Chicago.....	31	Rivers and Lakes Commission; Chicago.....	3
Fort Massac, Metropolis.....	1	Secretary of State; Springfield.....	62
Fort Employment Offices—		Secretary of State; Chauffeurs' Examiners; Chicago.....	
Chicago.....	6	Southern Normal School; Carbondale.....	9
Peoria.....		Stallion Registration, Board of; Springfield.....	5
Rockford.....		Supreme Court; Springfield.....	3
Rock Island.....		Treasurer, State; Springfield.....	
Springfield.....	1	University of Illinois; Urbana.....	349
East St. Louis.....	1	Utilities Commission, Public; Springfield.....	58
Game and Fish Conservation Commission, Springfield.....	93	Western Normal School; Macomb.....	13
Geological Survey; Urbana.....	5		
Grain Inspection; Chicago.....	103		
Grain Inspection; East St. Louis.....	11	Total.....	1,196

TABLE CXXI—(Public Service Employees, Illinois).

SHOWING THE NUMBER AND SALARIES OF CIVIL SERVICE EMPLOYEES OF TABLE CXX, CLASSIFIED BY YEARS OF SERVICE.

Years of service	Less than \$300	\$300-\$399 Inclusive	\$400-\$499 Inclusive	\$500-\$599 Inclusive	\$600-\$699 Inclusive	\$700-\$799 Inclusive	\$800-\$899 Inclusive	\$900-\$999 Inclusive	\$1,000-\$1,249 Inclusive	\$1,250-\$1,499 Inclusive	\$1,500-\$1,999 Inclusive	\$2,000-\$2,499 Inclusive	\$2,500-\$2,999 Inclusive	\$3,000 and over	Totals
0.....	8	5	5	8	28	29	9	29	69	3	20	3	1	.....	217
1.....	2	3	1	4	30	19	12	28	100	16	38	2	5	1	261
2.....	2	1	20	21	9	23	92	11	18	.....	3	4	204
3.....	1	1	2	7	10	5	8	23	2	11	2	1	.....	73
4.....	1	.....	3	8	9	8	17	1	4	.....	.....	.....	52
5.....	1	1	1	.....	8	12	2	11	38	4	19	6	1	5	109
6.....	1	.....	1	.....	4	10	7	10	39	1	10	4	2	2	71
7.....	2	.....	.....	1	1	4	2	8	12	2	11	2	2	.....	46
8.....	1	.....	5	5	1	9	.....	5	.....	.....	1	27
9.....	1	.....	1	4	2	1	11	1	6	2	.....	3	32
10.....	3	4	3	10	.....	3	1	1	1	26
11.....	2	1	1	1	3	2	3	1	.....	.....	14
12.....	1	1	.....	1	1	1	2	.....	.....	1	6
13.....	1	1	2	.....	1	1	.....	1	.....	.....	7
14.....	1	.....	.....	.....	.....	1	1	3	2	.....	1	.....	.....	9
15.....	1	1	.....	.....	1	1	.....	2	1	.....	.....	7
16.....	3	.....	.....	.....	3
17.....	1	.....	.....	.....	1	.....	1	3	.....	1	7
18.....	2	2	.....	2	.....	.....	2	8
19.....	1	.....	.....	.....	1	.....	3	.....	.....	.....	5
20.....	1	1	.....	.....	.....	.....	2	.....	.....	.....	4
21.....	1	.....	.....	1	.....	.....	.....	.....	.....	2
22.....
23.....	1	.....	1	.....	.....	2
24.....	1	.....	.....	.....	.....	.....	.....	1
25.....
26.....	1	.....	.....	.....	.....	1
27.....
28.....
29.....
30.....	1	.....	.....	.....	1
31.....
44.....	1	.....	.....	.....	.....	.....	.....	1
Totals..	14	10	14	17	109	130	70	138	414	48	164	30	16	22	1,196

TABLE CXXII—(Public Service Employees, Illinois).

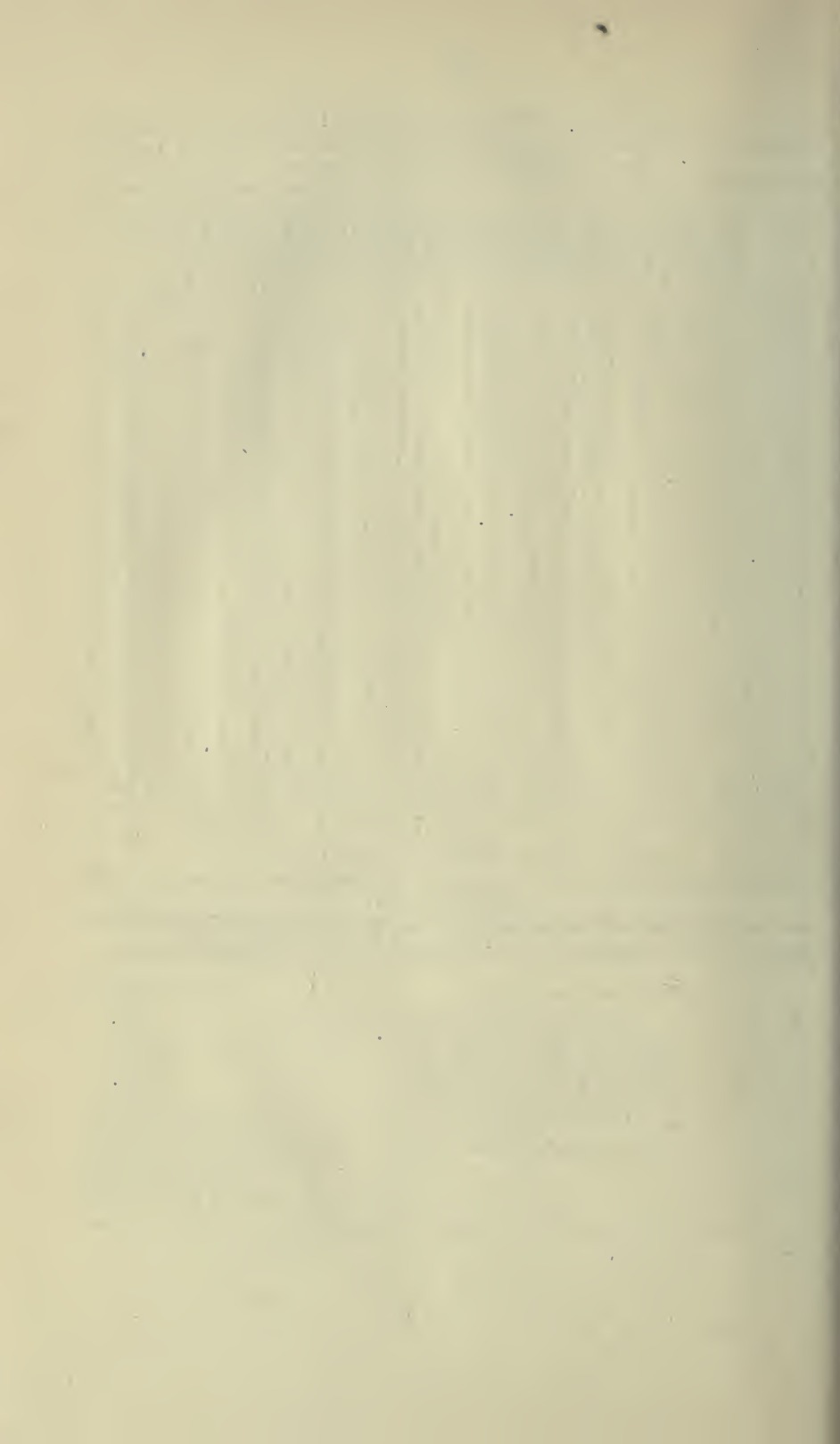
LIST OF STATE INSTITUTIONS SHOWING NUMBER OF EMPLOYEES UNDER CIVIL SERVICE IN EACH ON JANUARY 1, 1916.

Institution	Number	Institution	Number
Hospitals for the Insane:		Lincoln School and Colony (For Feeble-minded); Lincoln	278
Alton.....	9	School for Boys; St. Charles	94
Anna.....	339	Training School for Girls; Geneva	70
Chicago.....	466	Soldiers and Sailors' Home; Quincy	95
Elgin.....	327	Soldiers' Orphans' Home; Normal	63
Jacksonville.....	361	Soldiers' Widows' Home; Wilmington	28
Kankakee.....	637	Psychopathic Institute; Kankakee	19
Peoria.....	395	Illinois State Penitentiary; Joliet	119
Watertown.....	262	Southern Illinois (Chester) Penitentiary;	
Hospital for the Criminal Insane:		Menard	101
Chester; at Menard	38	Illinois State Reformatory; Pontiac	80
School for the Blind; Jacksonville	77		
Industrial Home for the Blind; Chicago	16	Total	4,065
School for the Deaf; Jacksonville	132		
Colony for Epileptics; Dixon	.....	
Eye and Ear Infirmary; Chicago	59		

TABLE OXXIII—(Public Service Employees, Illinois).

SHOWING THE NUMBER AND SALARIES OF CIVIL SERVICE EMPLOYEES IN TABLE OXXII, CLASSIFIED BY YEARS OF SERVICE.

Years of service	Less than \$300	\$300-\$399 Inclusive	\$400-\$499 Inclusive	\$500-\$599 Inclusive	\$600-\$699 Inclusive	\$700-\$799 Inclusive	\$800-\$899 Inclusive	\$900-\$999 Inclusive	\$1,000-\$1,099 Inclusive	\$1,100-\$1,199 Inclusive	\$1,200-\$1,299 Inclusive	\$1,300-\$1,399 Inclusive	\$1,400-\$1,499 Inclusive	\$1,500-\$1,599 Inclusive	\$1,600-\$1,699 Inclusive	\$1,700 and over	Totals
0	2	13	671	82	24	26	13	9	2	9	8	11	5	2	1	4	861
1	1	15	448	330	83	46	44	25	8	9	2	11	9	9	2	4	1,041
2	1	7	66	298	81	37	37	25	10	4	4	2	3	19	2	1	597
3		3	58	173	57	24	29	9	10	3	6	2	3	13	1	1	397
4	1		18	68	33	29	17	8	3	3	5	2	4	4	2		197
5		2	18	47	19	30	19	18	5	3	3	1		6	5		176
6		1	8	35	16	18	9	13	6	3	5	3		4	4	3	128
7		1	3	25	6	15	16	13	4	3	6	1	1	3	1	3	101
8	1		6	19	7	16	12	13	3	4	2	1	1	4	3	2	93
9			1	20	5	8	11	10	3	3	4	1	1	3	2	3	74
10			1	22	9	10	16	10	3	1	3	2	2	1	3	2	80
11	1	1		11	2	4	4	11	2	1	5	2	2	2	1		45
12			1	3	6	5	6	5	3		1	1	1	1			32
13			1	7	2	6	4	2	1	1	1	1	1	3		1	29
14		1		5	5	10	5	6	2	2	2	3		4			45
15			1	4	3	3	2	1	1	2	1		1	1	2		19
16				3	2	2	4	3	3			1	1	1	1		20
17				2		4	3	3				1	2	2			17
18				1	2	1	3	2	1	1	1	1	3				15
19				1	1	4	2	4	2	2	1	1	3			1	22
20				1	1		1	3						2			8
21				2	2	2	1	1	1				1		1		11
22		1	1				1	1	1								5
23				2	2	1	1	1	1					4			11
24				1	1		1				1						4
25				1		1						1					3
26								2			1		1				4
27			1		1			1						1			4
28	1			1			1	1									3
29			1														1
30			1	1	2				1								5
31														1	1		2
32							1										1
33								1				1					2
34				1									1	2			4
35						1											1
36								1						1			2
37				2													2
38							1							1			2
39																	
40																	
41																1	1
Totals ...	8	45	1,305	1,163	369	303	264	200	76	44	61	46	21	105	28	22	4,065



APPENDIX A.

TABULAR DIGEST OF PENSION LAWS ENACTED IN ILLINOIS FROM 1852 TO 1916.

INDEX TO APPENDIX A.

Beneficiaries.

Pages.

Firemen .....	..206 to 211 inclusive.
Policemen .....	..212 to 219 inclusive.
Park policemen .....	..220 and 221.
County employees .....	..222 and 223.
Fire insurance patrolmen.....	..224 and 225.
Municipal employees .....	..226 and 227.
Public school employees.....	..228 and 229.
Employees of public libraries.....	..230 and 231.
Employees of houses of correction.....	..232 and 233.
Public school teachers.....	..234 to 239 inclusive.

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
1874. R. S. 1874, Ch. 24, 221-226.	Members of police and fire departments of any city whose authorities provide by ordinance for the fund.	Corporate authorities shall make appropriations from a fund to be set apart in city treasury.	.....	1. Fines for violating department rules.
Amended L. 1875, pp. 42, 43.	.....	.....	.....	<i>Adds:</i> 2. Fines for violating fire ordinances. 3. Proceeds of sales of unclaimed stolen property.
Revised L. 1877, p. 62.	Members of police and fire departments of any city or village.	"Trustees of the Police and Firemen's Relief Fund", to consist of mayor, heads of police and fire departments, and chairmen of police and fire committees of city council or village trustees, with power exclusively to manage fund and finally to determine applications for relief.	Assessment, if levied, not to exceed \$5 a year.	<i>Adds:</i> 4. One-fourth of taxes and license fees of fire insurance companies not incorporated under laws of Illinois. 5. Interest on fund.
Amended L. 1879, p. 72.	.....	<i>Adds</i> to board, the comptroller, if any, or city clerk, and treasurer.	.....	<i>Adds:</i> Persons entitled to benefits may be assessed, though no longer in service.
Amended L. 1883, p. 59.	(Perhaps limits act to cities, etc., of 10,000.)	.....	.....	4. Increases proportion of taxes and license fees to one-half. <i>Adds:</i> 6. One-fourth of tax on dogs in cities, etc., of 10,000.
Amended L. 1901, p. 122.	.....	.....	.....	<i>Adds:</i> 7. Two per cent of saloon licenses in cities of 10,000 if authorized by popular vote.
L. 1887. p. 117.	Members of paid fire departments in cities, villages and incorporated towns of over 50,000.	"Board of Trustees of the Firemen's Pension Fund", to consist in cities of city treasurer, clerk, attorney, fire chief, and comptroller, and in towns of the president of board of trustees, clerk, attorney, and fire chief. Board to have exclusive control of fund, and conclusively to determine applications for pensions.	Assessment on salaries not to exceed 1 per cent or \$20 a year.	1. One per cent of revenues from licenses. Rewards for extraordinary services, unless competitive or permitted to be retained.

MEN.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	Such amount as to the corporate authorities seems just and reasonable.	1. Disability incurred in discharge of duty. 2. Death in, or because of injury received in, active discharge of duty.	2. Such amount as to the corporate authorities seems just for relief of surviving members of family.	.....
.....				Where there is a chartered benevolent society of policemen or firemen, city may appropriate to it its equitable share of the fund.
.....	Not over \$600 a year.	2. <i>Substitutes</i> "being killed" for "death" in discharge of duty. <i>Adds:</i> 3. Death in service after 10 years' service.	2 and 3. Not over \$600 a year to widow, while unmarried, or to children under 16.	.....
.....		3. <i>Substitutes:</i> Death after 10 years' service, assessments not in arrears.		.....
.....			
.....	1, 2 and 3. Half salary, not to exceed \$1,000 a year.	Board <i>may</i> award pensions in following cases: 1. Retirement for mental or physical disability contracted in service. 2. Retirement for mental or physical disability after 10 years' continuous service. 3. Retirement, aged 50, after 25 years' consecutive service, disabled for active service. 4. Being killed in performance of duty. 5. Death from injury received or disease contracted in performance of duty. 6. Death after 10 years' continuous service from cause contracted in service.	1, 2, 3, 4, 5 and 6. Board <i>may</i> award \$30 a month to widow, while unmarried, and \$6 a month for each child under 16, the total not to exceed half salary or \$1,000 a year.	Interest on fund to accumulate until fund is \$200,000. \$200,000; when accumulated, to form permanent fund or which only the income shall be paid out. Pensions payable pro rata if fund is insufficient.

FIREMEN

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
Amended L. 1889, p. 80.	1. <i>Omits</i> limitation to \$20.	<i>Adds:</i> 2. Fines and penalties imposed on firemen.
Added to L. 1901, p. 97.	<i>Adds:</i> 3. One-fourth of municipal tax of not over 2 per cent of receipts of companies not incorporated in Illinois, from fire insurance effected within the city, town or village.
Amended L. 1905, p. 100.	3. Increases share of tax to one-half.
Amended L. 1907, p. 186.	Extends act to cities, villages and incorporated towns of over 5,000.	<i>Adds</i> to board 2 active members of fire department elected by active members.	.....	<i>Adds:</i> 4. Fines for violating fire ordinances enforced by fire department.
L. 1909. p. 126. Amending L. 1901, p. 97.	3. Strikes out half share of tax in cities of over 50,000 and substitutes half share of tax in cities, etc., of less than 50,000.
Amended L. 1909, p. 128.

—Continued.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	1, 2 and 3. Half salary.	<p><i>Substitutes for 1, 2, 3, 4, 5 and 6: Board shall award pensions in following cases:</i></p> <p>1. Retirement for mental or physical disability by reason of service.</p> <p>2. Retirement or discharge, aged 50, after 22 years' service, the last two continuous.</p> <p>3. Being killed in performance of duty.</p> <p>4. Death from injury received in line of duty, or disease contracted by reason of occupation.</p> <p>5. Death (in service or retired) after 22 years' service.</p>	<p>1, 2, 3, 4 and 5.</p> <p><i>Provides:</i></p> <p>Board shall award the sums above, but omits limitation to \$1,000 a year.</p>	.....
.....				
.....				
.....		<p><i>Substitutes for 2, 3 and 4:</i></p> <p>2. Retirement or discharge after 22 years' service, the last two continuous.</p> <p>3. Being killed while in service.</p> <p>4. Death from injury received in service, or diseases contracted by reason of occupation.</p>	<p>Increases widow's pension to \$35 a month; children's to \$8 a month, and after their mother's death to \$15 a month.</p> <p><i>Adds</i> pensions of \$25 a month to dependent father and mother, if fireman was their sole support.</p>	<p>Excess accumulated above \$200,000 also to be kept as a permanent fund.</p>
.....				
.....				<p>Reduces amount of fund to be accumulated before income may be paid out in pensions. Transfers to this fund one-half of police and fire pension funds existing under law of 1877 in cities of 5,000.</p>

FIREMEN

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
Amended L. 1913, p. 170.	<i>Adds</i> to board a retired or pensioned fireman elected by retired and pensioned firemen.	.....	.....
Added to L. 1915, p. 284. Amending L. 1909, p. 126.	3. Changes provision that one-half tax <i>shall</i> be set apart for fund, to read that <i>all</i> of tax <i>may</i> be so set apart.
Revised L. 1915, p. 292.	<i>Drops</i> attorney from board, and <i>adds</i> a third active fireman.	.....	1. Changes 1 per cent of revenues from licenses, to 1 per cent of occupation licenses, excepting public utilities. <i>Adds:</i> 5. Tax of three-tenths mill (not to be included in 3 per cent tax limit) <i>may</i> be levied on all taxable property, during 1915, 1916 and 1917.

—Concluded.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
		2. Reduces period of service to 20 years.		
		<i>Substitutes for 1:</i> 1. Retirement rendered necessary by becoming disabled. Pension to cease if disability ceases. <i>Substitutes for 3, 4 and 5:</i> Death from any cause while in service, or during retirement after 20 years' service.	Increases widow's pension to \$45 a month. Excludes widow who marries fireman after he has retired with pension, and excludes their children.	<i>Omits provisions about permanent fund. Empowers board to take over existing funds for firemen's pensions.</i>

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
1874. R. S. 1874, Ch. 24, 221-226.	Members of police and fire departments of any city whose authorities provide by ordinance for the fund.	Corporate authorities shall make appropriations from a fund to be set apart in city treasury.	.....	1. Fines for violating department rules.
Amended L. 1875, pp. 42, 43.	.....	.....	.....	<i>Adds:</i> 2. Fines for violating fire ordinances. 3. Proceeds of sales of unclaimed stolen property.
Revised L. 1877, p. 62.	Members of police and fire departments of any city or village.	"Trustees of the Police and Firemen's Relief Fund", to consist of mayor, heads of police and fire departments, and chairmen of police and fire committees of city council or village trustees, with power exclusively to manage fund and finally to determine applications for relief.	Assessment, <i>if levied</i> , not to exceed \$5 a year.	<i>Adds:</i> 4. One-fourth of taxes and license fees of fire insurance companies not incorporated under laws of Illinois. 5. Interest on fund.
Amended L. 1879, p. 72.	.....	<i>Adds</i> to board, the controller, if any, or city clerk, and treasurer.	.....	<i>Adds:</i> Persons entitled to benefits may be assessed, though no longer in service.
Amended L. 1883, p. 59.	(Perhaps limits act to cities, etc., of 10,000.)	.....	.....	4. Increases proportion of taxes and license fees to one-half. <i>Adds:</i> 6. One-fourth of tax on dogs in cities, etc., of 10,000.
Amended L. 1901, p. 122.	.....	.....	.....	<i>Adds:</i> 7. Two per cent of saloon licenses in cities of 10,000 if authorized by popular vote.

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1887, p. 122.	Members of police force in cities, villages and incorporated towns of 50,000.	"Board of Police Pension Fund Commissioners," consisting of president of board of trustees, comptroller, clerk, head of police department, treasurer and attorney.	One per cent of salary, not to exceed \$2 a month.	1. Two per cent of saloon licenses. 2. Three-fourths of licenses and taxes on dogs. 3. Fines for violating department rules. 4. Sales of unclaimed stolen property. 5. One-fourth licenses to pawnbrokers, second-hand dealers and junk stores. 6. Fees and fines for carrying concealed weapons. 7. One-half costs for violating city ordinances. 8. Rewards to police unless excepted by chief.
Amended L. 1899, p. 101.				
Amended L. 1901, p. 123.				
Amended L. 1903, p. 107.		"Board of Trustees of the Police Pension Fund of —," of 5 members: 3 appointed by mayor, 1 elected from and by active firemen, 1 elected from and by pensioners.	1. Reduces maximum contribution to \$1 a month. <i>Adds:</i> 2. One per cent to be deducted from pensions granted under the act.	1. <i>Substitutes</i> 3 per cent of licenses to saloons and wholesale liquor dealers and 3 per cent of all other city licenses, not to exceed \$25,000 a year. 4. <i>Adds</i> sales of unclaimed lost property. 5. <i>Adds</i> money paid for special detail of police. 7. <i>Adds</i> exception of competitive awards.
Amended L. 1907, p. 199.				

—Continued.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	1. Half salary for rank held for year immediately before retirement. 2. Not more than half salary. 5. Pensions provided for above.	1. Retirement, aged 50, after 20 years' police service. 2. Retirement for physical disability incurred in, and in consequence of, performance of duty. Pension to cease when disability ceases. 3. Loss of life in performance of duty, or death from injuries received in performance of duty. 4. Death in service after 10 years' service. 5. Right to pension as policeman, or policeman's widow or child under act of 1877 (L. 1877, p. 62). Pensions under that act to cease.	3. Half salary to widow while unmarried, or, if none, to children under 16, while unmarried. 4. Board may grant proper pension not exceeding half salary to widow, while unmarried, or, if none, to children under 16, while unmarried. 5. Pensions provided for above.	Pensions shall cease on conviction for crime, habitual drunkenness, nonresidence in State, or disobedience to requirements of board. Pensions payable pro rata if fund is insufficient.
.....			1. Pension for retirement after 20 years' service to be continued to widow, while unmarried, or to children under 16.	.....
.....		1. Changes 20 years' police service to 20 years' combined police and fire service.	.....	.....
.....	Pensions shall not be more than \$900 nor less than \$600 a year (the maximum limit to apply to pensions previously granted under 1).	.....	Excludes from pension widow who marries policeman after retirement, and their children.	\$300,000 when accumulated to be a permanent fund, and income then may be used to pay pensions.
.....			1. Extends pension granted survivors by act of 1899 to cases where pensioner died before act was passed or in force.	.....

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
Amended L. 1911, pp. 163, 169.	.....	.....	1. Raises assessment on salaries to 1½ per cent, not to exceed \$3 a month. <i>Omits 2.</i>	1. Increases percentage of saloon and liquor licenses to 4 per cent. 2. Increases maximum to be derived from other licenses to \$50,000. <i>Omits 6.</i>
Amended L. 1911, p. 170.	.....	.....	.....	.....
Amended L. 1913, p. 174.	.....	.....	.....	.....
L. 1909, p. 133.	Members of police force in cities, villages and incorporated towns of 20,000-50,000.	"Board of Trustees of the Police Pension Fund of —," of 3 members: 2 appointed by mayor from residents of city, 1 elected from and by policemen and beneficiaries.	1. One per cent of salaries, but not to exceed \$1 a month. Collections from employees and other sources shall not exceed \$2,500 in any year. The limitation shall be effected by reducing the contribution from proceeds of dramshop licenses, if necessary. 2. One per cent deducted from police pensions.	1. Two per cent of liquor licenses. 2. Three-fourths of dog licenses. 3. Ten per cent of all other licenses. 4. Money paid for special detail of policemen. 5. Ten per cent of fines for violating city ordinances. 6. Rewards to policemen unless excepted by board. 7. Fines for violating rules of police department.
Amended L. 1913, p. 173.	Extends act to cities of 9,000-50,000.	.....	<i>Omits 1, in case of cities that have not adopted civil service in police department.</i>	<i>Omits 6, in case of cities that have not adopted civil service in police department.</i>

—Continued.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	1. Age requirement omitted as to those who shall retire thereafter. Service as probationary policeman to count in 20-year period. <i>Adds:</i> 6. Adjudication of insanity after 10 years' service, and while still in service; pension payable to wife or child, to cease if policeman is declared sane or leaves Illinois.	6. Half salary, not more than \$900 nor less than \$600 a year, to widow, or, if none, to children under 16.	<i>Omits</i> provisions concerning \$300,000 fund. Modifies conditions of forfeiture by changing conviction for <i>crime</i> to conviction for <i>felony</i> , and non-residence in state to nonresidence in United States.
.....	Makes provisions for pensions for police matrons. This statute held unconstitutional in Lyons vs. Police Pension Board, 255 Ill., 139.	.....	.....
.....	2. Pension on retirement for physical disability continued to widow, while unmarried, or children under 16.	.....
.....	1. Half salary for rank held for year immediately before retirement, not to exceed \$600 a year. 2. Half salary, not to exceed \$600 a year.	1. Retirement, aged 50, after 20 years' service. 2. Retirement or suspension from duty for physical disability incurred in, and in consequence of, performance of duty. Pension to cease on resumption of duty. 3. Loss of life in performance of duty, or death from injuries received in the performance of duty. 4. Death in service after 10 years' service.	1. Pension continued, provided policeman has not married after retirement, to widow, or children under 16, or dependent parent, to cease as to each if he or she marries. 3 and 4. Half salary, not to exceed \$600 a year, to widow, or children under 16, or dependent parent, to cease as to each if he or she marries.	Transfers to fund under this act all police pension funds and half of police and fire pension funds already existing. Pensions payable pro rata, if funds insufficient. Pensions shall cease on conviction for felony, habitual drunkenness, non-residence in State (unless climate is hazardous to health), or disobedience to requirements of board.
.....

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1915, p. 304.	Policemen in cities of over 200,000.	"Board of Trustees of the Police Pension Fund of," of 5 members: 3 appointed by mayor from residents of county, 1 elected from and by policemen, 1 elected from and by beneficiaries. Board may take custody of fund, shall exclusively administer it, and conclusively decide all questions of fact relating to its administration, shall employ actuary, and maintain a reserve fund for pensions for policemen appointed after January 1, 1916, certifying estimates therefor to the common council.	1. Two per cent of salaries.	1. a. Such a tax during 1915, 1916 and 1917, not to exceed seven-tenths of a mill on the dollar, as will, with other receipts, suffice to pay police pensions under previous acts, and pensions to policemen appointed before 1916 and their survivors, and maintain a reserve for pensions for policemen appointed after January 1, 1916, or b. If in any year the city does not provide such a tax, an equivalent sum taken from the proceeds of licenses on occupations, excepting public utilities. 2. Money paid for special detail of policemen. 3. Fines for violating rules of department. 4. Proceeds of sales of unclaimed or stolen property. 5. Interest on fund. 6. Rewards for extraordinary police service, except when competitive or allowed to be retained.
Added to L. 1915, pp. 262, 267. (Continued on adoption by voters.)				

—Concluded.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
<p>.....</p>	<p>1. Half salary for rank held for year immediately before retirement, not more than \$900 nor less than \$600 a year. 2. Half salary, not more than \$900 nor less than \$600 a year. 6. Pensions provided above.</p>	<p>1. Retirement from police force after 20 years' service, including service as probationary policeman and as fireman. 2. Retirement for physical disability incurred in, and in consequence of, performance of duty, and grant of pension by board. 3. Loss of life, or death from injuries incurred in, and in consequence of, performance of duty. 4. Death in service after 10 years' service. 5. Adjudication of insanity after 10 years' service and while still in service; pension payable to wife or child, to cease if policeman is declared sane or leaves Illinois. 6. Right to pension under previous pension acts.</p>	<p>1. Pension continued to widow, while unmarried, if married to policeman six months before retirement, or to natural children under 16. 2. Pension continued to widow, while unmarried, if married before disablement, or to natural children under 16. 3. Half salary for rank held for year immediately before retirement, not more than \$900 nor less than \$600 a year, to widow, while unmarried, or natural children, except wife married after policeman's retirement, and her children. 4. Half salary for rank held immediately before death, not exceeding \$900 a year, to widow, while unmarried, if married two months before death, or to natural children. 5. Half salary, not exceeding \$900 a year, to wife or natural children under 16. 6. Pensions provided above.</p>	<p>Transfers to fund under this act, police pension funds under act of 1887.</p> <p>Policemen that may be transferred to Chicago by consolidation of local governments shall have credit for past services; park police pension fund shall be added to Chicago police pension fund and park police pension claims paid from the consolidated fund.</p>

PARK

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1911, p. 455. Repealed and reenacted by L. 1913, p. 446.	Members of police force established by park commissioners of towns.	"Boards of Trustees of the Police Pension Fund of the Park Board of Commissioners of —," of 5 members: 3 to be residents of town appointed by president of park board, 1 chosen from and by active policemen, 1 chosen from and by pensioners. Pension board to have exclusive management of fund.	1. One per cent of salaries, not to exceed \$3 a month.	1. Fines for violating department rules. 2. Fines and penalties for violating ordinances of park commissioners, or laws of state within territory under park commissioners, when arrest is made by park policemen. 3. Interest on fund. 4. Rewards to park policemen unless excepted by chief.
Revised L. 1915, p. 542. (Contingent on consent of park commissioners and town authorities.)	.....	Board to employ actuary and maintain reserve fund for pensions for policemen appointed after January 1, 1916, certifying estimates for pensions and reserves to the park commissioners.	<i>Substitutes for</i> 1. Two per cent of salaries.	<i>Substitutes for 1, 2, 3 and 4:</i> 1. Tax on property in district sufficient for pensions and reserve, but not to exceed one - twenty - fifth mill for South Park (Chicago), one-tenth mill for West Chicago Park, or one-seventeenth mill for Lincoln Park (Chicago). 2. Interest on fund. 4. Rewards for extraordinary services unless competitive or permitted to be retained.

POLICEMEN.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	<p>1. Half salary for rank for year immediately before retirement, but not more than \$900 nor less than \$600 a year.</p> <p>2. Half salary, but not more than \$900 nor less than \$600 a year.</p>	<p>1. Retirement after 20 years' service.</p> <p>2. Retirement for becoming physically disabled while a policeman. Pension to cease when disability ceases.</p> <p>3. Losing life in performance of duty, or dying of injuries received in performance of duty.</p> <p>4. Death or insanity while in service after 10 years' service. Pension payable to wife, children under 16, or parent.</p>	<p>1. Pension continued to widow, while unmarried, or children under 16, or parent, except wife married after retirement, and her children.</p> <p>3. Half salary, not more than \$900 nor less than \$600 a year, to widow, while unmarried, or children under 16 while unmarried, or parents, except wife married after retirement, and her children.</p> <p>4. Half salary, not more than \$900 a year, to widow, while unmarried, [or in case of insanity, to wife], or children under 16 while unmarried, or parents.</p>	<p>Pensions payable pro rata, if funds insufficient, and to cease for conviction of felony, habitual drunkenness, nonresidence in State or disobedience to requirements of board.</p>
.....		<p><i>Substitutes for 1 and 2:</i></p> <p>1. Retirement, <i>aged 50</i>, after 20 years' service.</p> <p>2. Retirement for becoming physically disabled in, and in consequence of, performance of police duty.</p> <p>4. <i>Adds:</i> In case of insanity pension to cease if policeman leaves Illinois or is pronounced restored to reason.</p>	<p><i>Substitutes for 1:</i></p> <p>1. Pension continued to widow, while unmarried, if married more than 6 months before retirement, or to natural children under 16.</p> <p><i>Adds:</i></p> <p>2. Pension continued to widow, while unmarried, if married before disablement, and to natural children under 16.</p> <p>3. <i>Changes</i> half salary to half salary for rank held for year immediately before retirement, and excludes widow married after retirement, and her children.</p> <p>4. In case of death in service excludes widow married not more than six months before death.</p>	<p><i>Omits:</i> Provision for paying pensions pro rata. Pension to cease on nonresidence in United States instead of on nonresidence in State. Pensions to be reduced by amount of compensation received under workmen's compensation laws.</p>

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1915, p. 342.	Officers and employees of counties of over 150,000, except temporary and probationary employees, employees who on July 1, 1915, are over 60 and have served less than 10 years, and laborers who do not within six months elect to participate.	"Board of Trustees of the Municipal Pension Fund of — County," to consist of county comptroller, county treasurer, and 3 employees elected by employees, with power to determine applications for pensions and to suspend pensions when disability ceases.	Two dollars a month deducted from wages, or, if employee is for good cause off the pay roll, voluntarily paid in.	.....

EMPLOYEES.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
Amounts deducted with interest at 3 per cent to employees whose positions are abolished.	1 and 2. \$50 a month. 2. \$50 a month for not more than two years, which may be extended for continued disability.	1. Retirement, aged 55, after 20 years' service, having contributed for 20 years, or agreeing to pay the deficiency in three years with 5 per cent interest, payment to be by deductions from pension. Contributions to be continued until July 1, 1920, by those who retire in the interim. 2. Retirement after 20 years' service, having contributed for 20 years, or paying the deficiency within 30 days, and continued contribution until 55. 3. Retirement for disability after 5 years' service.	.....	Pensions not to begin before July 20, 1920.

FIRE INSURANCE

Reference to legislation.	Beneficiaries.	Management	Sources of revenue.	
			Employees.	Other sources.
L. 1895, p. 101. R. S., Ch. 24, 423-434.	Members of paid fire insurance patrol provided by board of underwriters which establish a pension fund, in cities, villages and incorporated towns of over 50,000.	Board of trustees to consist of the president, secretary and treasurer of the underwriters, the chairman of the patrol committee and the superintendent or chief officer of the patrol. Board to have exclusive control of fund and conclusively to determine applications for pensions.	1. Assessment not to exceed 1 per cent of salary.	1. Two per cent of the money assessed by the boards of underwriters on fire insurance companies doing business in the city for expenses of fire patrol, under authority of act of March 28, 1874. R. S., Ch. 142. 2. Rewards for extraordinary services unless competitive or permitted to be retained.

PATROLMEN.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
.....	1 and 2. Half salary.	1. Retirement for becoming mentally or physically disabled by reason of service. 2. Retirement or discharge, aged 50, after 22 years' service, the last two continuous. 3. Being killed in performance of duty. 4. Death from injury received in line of duty or disease contracted by reason of occupation. 5. Death (in service or retired) after 22 years' service.	1, 2, 3, 4 and 5. Thirty dollars a month to widow, while unmarried, and \$6 a month for each child under 16, the total not to exceed half salary.	.....

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1905, p. 98.	Employees of cities of over 100,000. The term "employees" to include employees in water works and water department, receiving \$65 a month.	Board of trustees, a body corporate, consisting of the mayor, comptroller and 4 members elected from and by contributing employees. The board has power to fix contributions and pensions within the limits of the act, determine applications for pensions, and suspend pensions for cause.	Not less than 1 per cent or more than 2 per cent (as board may fix) of salaries of \$65 a month or more.	.....
L. 1911, p. 158.	Employees of cities of over 100,000, employed under Civil Service Act of 1895, or before it was passed, except temporary, probationary or 60-day employees, those who participate in another municipal pension fund, those who on July 1, 1911, are over 60 and have served less than 10 years, and laborers who do not within six months elect to participate.	"Board of Trustees of the Municipal Pension Fund of —," to consist of city comptroller, city treasurer, and 3 employees elected by employees, with power to determine applications for pensions, and to suspend pensions when disability ceases.	1. Two dollars a month deducted from salary or wages, or, if employee is for good cause off the pay roll, voluntarily paid in.	.....
Amended L. 1915, pp. 298, 302.	Excludes employees under 21.	.....	.....	A sum equal to the amount deducted from salaries and wages to be set apart from license fees on occupations other than public utilities, during 1916 and 1917.
Added to L. 1915, pp. 262, 267. (Contin- gent on adoption by voters.)	.....	.....	.....	.....

EMPLOYEES.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
1. Half amount paid in, on resignation or dismissal after 5 years' contribution.	1 and 2. Half salary. 3. An annuity for 2 years, which may be extended for continued disability.	1. Retirement, aged 50, after 20 years' service in water works or water department and 10 years' contribution. 2. Resignation or dismissal after 12 years' service in water works or water department, and continued contribution for remainder of 20-year period and until aged 50. 3. Retirement for disability after 5 years' contribution. 4. Death while a contributor, after 3 years' contribution.	1. One-fourth of salary to widow, while unmarried, or children under 18. 4. An amount not over \$300 to widow, or minor children, or for burial expenses.	On June 29, 1916, the Corporation Council of the City of Chicago rendered an opinion that this fund was not legally in existence as the City Council had not created it by ordinance as required by act. Pursuant to this opinion money in fund was distributed to contributors and fund lapsed. Members automatically became members of fund created by act of 1911.
1. Amount deducted to employees whose positions are abolished.	1 and 2. \$50 a month. 3. \$50 a month for not more than 2 years, which may be extended for continued disability.	1. Retirement, aged 55, after 20 years' service, having contributed for 20 years, or agreeing to pay the deficiency with 5 per cent interest in 3 years, payment to be by deductions from pension. Contributions to be continued until July 1, 1916, by those who retire in the interim. 2. Retirement after 20 years' service, having contributed for 20 years, or paying the deficiency within 30 days, and continued contribution until 55. 3. Retirement for disability after 5 years' service, subsequent to July 1, 1911.	.....	Pensions not to begin before July 1, 1916.
Adds: 3. Half amounts deducted, on resignation or dismissal to employee, or on death in service, to his legal representatives.	.....	Adds: 5. Retirement, aged 65, after 10 years' service; of honorably discharged Civil War veteran who is on July 1, 1915, an employee under civil service participating in the fund, on agreeing to pay sum by which his contributions fall short of 20 years' contribution, to be deducted from pension by installments of \$10 a month.	.....	Absence from duty other than suspension or for discharge to count as time of service.
.....	.....	Gives credit, as to time, for previous service of employees who may be transferred to Chicago by consolidation of local governments.	.....	.....

PUBLIC SCHOOL

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1895, p. 312.	Public school employees and teachers in cities of over 100,000.	Board composed of members of board of education, school superintendent, and 2 representatives selected by teachers and employees.	Deduction from salaries, not to exceed 1 per cent.	.....
Amended L. 1901, p. 300.	.....	.....	.....	.....
Superseded as to employees by L. 1903, p. 309.	Public school employees who accept act in cities of over 100,000, including only engineers, janitors and office employees of board of education, earning over \$49 a month.	Board of trustees to consist of president and secretary of board of education and 4 contributing employees elected by contributing employees, with power to determine ap- portions, and compromise claims by refunding contribu- tions.	1. Deduction from salaries of not less than \$12 nor more than \$48 a year.	.....
Added to L. 1907, p. 528.	.....	.....	.....	Interest on proceeds of city school taxes, not to exceed 1 per cent of taxes for year, shall be added to teachers' and to employees' pension funds.
Added to L. 1913, p. 583.	.....	.....	.....	Adds: Board of education may annually appropriate and pay into fund a sum which, together with the interest on school funds paid in under act of 1907, shall not exceed double the amount deducted for that year from employees' salaries.

EMPLOYEES.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
All contributions of teacher or employee willing to continue in service and not retained.	Half salary, not to exceed \$600 a year.	Retirement after service in public schools of 20 years for women, or 25 years for men; of which three-fifths has been within the municipality where the board of education has jurisdiction.	.....	.....
.....	.....	.....	.....	Teacher or employee by written withdrawal is relieved from further payments, and loses right to benefits.
To any employee who resigns or is dismissed after 10 years, contributions, half the sums contributed.	1 and 2. Annuities of not more than \$600 to be fixed by board in proportion to amounts contributed. 3. Such portion of the full annuity as board may determine, to be paid for two years, which may be extended for continued disability. 5. Such portion of the full annuity as board may determine.	1. Retirement, aged 55, after 10 years' service. 2. Retirement after 20 years' service (on 60 days' notice.) 3. Retirement for disability after 10 years' service (on one year's notice, unless waived.) 4. Death of contributor, who has never been a beneficiary. 5. Retirement under act of 1895.	4. Board may pay not more than one year's benefit to widow, or if none, to minor children.	Board may exempt any employees from the act, when the interests of the fund make it necessary. Contributions of employees under act of 1895 transferred to fund under this act.
.....
.....

EMPLOYEES OF

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1905, p. 309.	Contributing employees in public libraries organized under act of March 7, 1872, in cities of over 100,000, including all persons in employ of library board at a yearly salary.	Board of trustees, a body corporate, to consist of the president and secretary of the board of directors of the library, and 3 members elected by contributors, of whom 1 shall be a member of the board of directors and 2 shall be contributors. Board of trustees may invest fund at its discretion, fix the amount of contributions and of pensions, within the limits of the act, determine applications for pensions, suspend pensions for cause, and compromise claims by surrendering contributions, and, in interest of fund, exempt any employees from the act.	1. Not less than \$6 nor more than \$48 deducted from salary each year.	2. Such moneys from miscellaneous sources as directors of library determine.
Amended L. 1907, p. 373.	.....	.....	.....	.....
Added to L. 1915, pp. 262, 276. (Contin- gent on adoption by voters.)	.....	If consolidation act goes in to effect, board in Chicago shall consist of 2 contrib- uting employees, and 3 others elected as city council may direct.	.....	.....

PUBLIC LIBRARIES.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
Half amount paid in, to employee who resigns or is dismissed.	<p>1. Such benefit or annuity, proportionate to amount contributed, as board may determine.</p> <p>2. An annuity.</p> <p>3. Such part of the established annuity as board may determine for 2 years, which may be extended for continued disability.</p>	<p>1. Retirement, aged 50, after 10 years' service and contribution.</p> <p>2. Retirement after 20 years' service and 5 years' contribution.</p> <p>3. Retirement for disability after 10 years' service and contribution.</p> <p>4. Death in service.</p>	<p>4. Not over one year's benefit to widow, or, if none, to minor children.</p>	<p>An employee may at any time become a contributor entitled to benefits by paying amount equivalent to contributions from time act went into effect or from time he entered the service. He may by notice withdraw from contribution and benefits.</p>
			<p>4. Substitutes "next of kin" for "minor children."</p>	<p>Employee, to become entitled to benefits, must elect within specified times, or within 3 years pay the arrears of the contributions he would have made.</p>

EMPLOYEES OF HOUSES

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1911, p. 153.	Contributing employees at yearly salaries of houses of correction in cities of 150,000.	Board of trustees, a body corporate, consisting of chairman of board of inspectors, superintendent of house of correction, and 3 members elected by contributing employees, of whom 1 shall be a member of the board of inspection, and 2 contributing employees. Board may determine applications for pensions and compromise claims by returning contributions, and subject to the approval of a majority of the contributors, invest in public bonds, suspend annuities for cause, and in interest of fund exempt employees from the act. Fund to be in custody of city treasurer.	Two per cent of wages.	1. Two per cent of earnings of houses of correction.
Revised L. 1915, p. 465.	Contributing employees of houses of correction in cities of 150,000 employed under Civil Service Act, or appointed before it was passed and in service July 1, 1911, except temporary, probationary and 60-day employees, and those who on July 1, 1915, are over 50 and have served less than 10 years.	<i>Substitutes</i> as member of pension board a beneficiary elected by beneficiaries, in place of the member of the board of inspection elected by contributors.	.....	1. Increases 2 per cent to 3 per cent. <i>Adds:</i> 2. Three per cent of fines and costs for violating city ordinances imposed on persons imprisoned in houses of correction for non-payment thereof.
Added to L. 1915, pp. 262-267. (Contin- gent on adoption by voters.)	.....	If consolidation act goes in- to effect, board in Chicago shall consist of 5: 2 to be contributing employees, 3 to be elected as city council shall direct.	.....	.....

OF CORRECTION.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
Half amount paid in, on dismissal or resignation after 3 years' service.	1, 2 and 3. \$480 a year unless annuities are reduced by the board.	1. Retirement, aged 50, after 20 years' service, and payment of 20 years' contributions, or, for service before act is in force, of a sum equal thereto. Pension not to begin before July 1, 1916. 2. Retirement for continuing disability after 3 years' contributions. 3. Death in service.	1, 2 and 3. \$480 a year, unless annuities are reduced by the board, to widow, while unmarried, or children until youngest child reaches 16, or to mother of deceased.	City Treasurer may pay pensions pro rata, if fund insufficient to pay in full. Contributors may withdraw from further contribution and participation.
..... 1. \$600 a year. 2 and 3. Not over \$600 a year.	1. \$600 a year. 2 and 3. Not over \$600 a year.	1. Omits requirement as to age. Adds: 4. Widows and children receiving annuities under act of 1911.	1. Not over \$600 a year to widow, while unmarried, if married before retirement and 5 years before death, or to children, other than adopted, until the youngest reaches 16, or to mother of deceased. 2 and 3. Not over \$600 a year to widow, while unmarried, if married 5 years before death, or to children and mother, as above. 4. Increased annuities not over \$600.	.....

PUBLIC SCHOOL

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1895, p. 312.	Public school teachers and employees in cities of over 100,000.	Board composed of members of board of education, school superintendent, and 2 representatives selected by teachers and employees.	Deduction from salaries, not to exceed 1 per cent.	.....
Amended L. 1901, p. 300.	.....	.....	.....	.....
Added to by L. 1907, p. 528.	.....	.....	.....	Interest on proceeds of city school taxes, not to exceed 1 per cent of taxes for year, shall be added to teachers' and to employees' pension funds.
Super-seded as to teachers by L. 1907, p. 529.	Public school teachers in cities of over 100,000 who are employed hereafter or become contributors within 6 months, and persons entitled to pensions under act of 1895.	Board of trustees composed of the secretary of the board of education, 2 members of the board of education elected by it, and 6 teachers elected by contributing teachers. Suits shall be in name of board of education for use of board of trustees.	Yearly deductions from salaries of teachers hereafter employed or who elect to contribute, according to the number of years each has taught, as follows: a. Those who have taught not more than 5 years, \$5. b. 5-10 years, \$10. c. 10-15 years, \$15. d. More than 15 years, \$30.	1. Other payments into fund according to law (see L. 1907, p. 528, sup.)
Revised L. 1909, pp. 342, 384-388.	.....	.....	.....	Adds: 2. Interest on fund.

TEACHERS.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
All contributions of teacher or employee willing to continue and not retained.	Half salary, not to exceed \$600 a year.	Retirement after service in public schools of 20 years for women or 25 years for men; of which three-fifths has been within the municipality where the board of education has jurisdiction.		
				Teacher or employee by written withdrawal is relieved from further payments and loses right to benefits.
1. To teachers willing to continue and not retained, all amounts contributed.	1. \$400 a year.	1. Retirement after teaching 25 years in the public schools, three-fifths thereof in schools of the city, and contributing for 25 years under this act or act of 1895, with right for period of past service to pay the contributions that would have been payable under this act with 4 per cent interest from the times payments would have been made.		Pensions may be reduced pro rata, if fund insufficient. Transfers to this fund teachers' pension funds under act of 1895.
2. To teachers who voluntarily retire before more than 15 years, half the amounts contributed.	2. Such proportion of \$400 a year as contributions made bear to full contributions for 25 years, (i. e. \$450.)	2. Retirement for permanent disability after teaching 15 years in the public schools, three-fifths thereof in schools of the city, and contributing for 15 years as above.		
	3. Such proportion of \$400 a year as length of service bears to 25 years, less \$30 a year, as additional contribution until total contribution reaches \$450.	3. Retirement under act of 1895 with right to pension.		
		Omits 3.		Omits provision that pensions may be reduced pro rata if fund insufficient.

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
Amended and added to L. 1911, pp. 511, 512.	Extends time to become contributor to July 1, 1912, and for former contributors who have withdrawn, and are hereafter re-employed, to a year from time of re-employment.	.....	.....	3. Empowers board of education to add to fund annually a sum of public money, which together with interest on school funds received under act of 1907, will equal the amount contributed for that year from teachers' salaries.
Added to and amended L. 1913, pp. 593, 594.	Extends time to become contributor to July 1, 1916.	Substitutes chairman of finance committee of board of education, as member of pension board in lieu of secretary of board of education. Provides for a primary election to nominate candidates to be elected to pension board from teachers.	Increases contributions from teachers' salaries by 20 per cent.	3. Requires board of education to add to fund annually a sum of public money which together with interest, as above, will equal the amount contributed from teachers' salaries, and empowers them to add an amount which will double it.
L. 1911, p. 513.	Public school teachers hereafter employed or who elect to contribute, in districts of 1,000 to 100,000 not governed by special acts, where board of education establishes a pension fund.	The treasurer of the district shall hold the pension fund subject to the control of the board of education. There shall be a board of management, which shall by resolution declare when a person is entitled to a pension. The board of management shall consist of 3 or 9 members, one-third elected by board of education from its members, two-thirds by teachers from their number. The board of education shall determine the number of members and their terms. Suits to be in the name of the board of education for use of the pension and retirement fund.	1. Yearly deductions from salaries of teachers hereafter employed or who elect to contribute, according to the number of years each has taught, as follows: a. Those who have taught not more than 5 years, \$5. b. 5-10 years, \$10. c. 10-15 years, \$15. d. Over 15 years, \$30.	1. Interest on pension fund. 2. Interest on district funds, whether for educational or building purposes.
L. 1911, pp. 513, 516, §127n.	Public school teachers in districts of 1,000-100,000 not governed by special acts, where there is not enough revenue to maintain fund under above provisions, and school district by majority vote establishes fund herein provided for.	.....	.....	Such revenues as may be devoted to the purpose by the directors of a district or by direct appropriation by a town.

TEACHERS—Continued.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
		1 and 2. Requires that the three-fifths service in the schools of the city be the last service before retirement. Restores 3, which was omitted in the revision of 1909.		
1. To teachers willing to continue in service and not retained, all amounts contributed.	1. Annuity not to exceed \$400. 2. Such proportion of full annuity of \$400 as contributions made bear to full contribution for 25 years.	1. Retirement after teaching 25 years in the public schools, three-fifths thereof in the district, and contributing for 25 years to the fund, with right for period of past service to pay the contributions that would have been payable under this act with 4 per cent interest from the time payments would have been made. 2. Retirement for permanent disability, after teaching 15 years in the public schools, three-fifths thereof in the district, and contributing for 15 years, with right as to past services as above.		
.....	Annuity not to exceed half salary at retirement nor \$400.	Retirement, aged 50, after 25 years of faithful service.		

Reference to legislation.	Beneficiaries.	Management.	Sources of revenue.	
			Employees.	Other sources.
L. 1913, p. 598.	Public school teachers, including superintendents and principals, in districts of 10,000-100,000 governed by special acts, including Peoria.	Enacts provisions of L. 1911, p. 513, for districts not governed by special acts.	Enacts provisions of L. 1911, p. 513, for districts not governed by special acts.	Enacts provisions of L. 1911, p. 513, for districts not governed by special acts, and adds: 3. Interest on proceeds of sales of school lands.
Amended L. 1915, p. 648.	.....	.....	.....	Adds: 4. In Peoria county, a sum annually set aside from State common school fund equal to one-tenth mill on the dollar of assessed valuation of taxable property in the district.
L. 1913, p. 598, §14.	Public school teachers, including superintendents and principals, in districts of 10,000-100,000 governed by special acts where there is not enough revenue to maintain fund under above provisions, and school district by majority vote establishes fund herein provided for.	Enacts provisions of L. 1911, pp. 513, 516, §127n.	.....	.....
Revised (except as to Chicago and Peoria), L. 1915, p. 649.	Public school teachers, assistant teachers, teacher-secretaries, supervisors, principals, superintendents and assistant superintendents, except in cities and districts of over 65,000 by census of 1910, already having pension funds, hereafter employed or who before September 1, 1920, elect to become contributors and annuitants under previous funds.	"Board of Trustees of the Illinois Teachers' Pension and Retirement Fund," to consist of Superintendent of Public Instruction, State Treasurer, and 3 contributors or annuitants elected by contributors and annuitants by ballot by mail, from candidates nominated by petition. Board, though not a corporation, may sue and be sued by its name. School authorities in each district to retain from salaries the sums prescribed and transmit them yearly to State Treasurer.	Monthly deductions for the first five months of teaching in each year from salaries of teachers hereafter employed or who elect to contribute, according to the number of years each has taught as follows: a. Those who have taught not more than 10 years, \$1. b. 10-15 years, \$2. c. 15-25 years, \$6.	A sum annually set aside from State common school fund equal to one-tenth mill on the dollar of assessed value of taxable property in district.

TEACHERS—Concluded.

Refunds.	Amount of pension.	Conditions for pension.	Pensions to survivors.	Other data.
Enacts provisions of L. 1911, p. 513, for districts not governed by special acts,				Validates pensions granted and funds established under color of L. 1911, p. 513.
Half amount paid in, on ceasing to teach before time of service exceeds 15 years, amount refunded to be returned with 4 per cent interest, if re-employed.	1. \$400 a year. 2. \$16 a year for each year of service, not to exceed \$400 a year. 3. Pensions as above.	1. Retirement, aged 50, after 25 years' service in public schools of U. S., three-fifths in Illinois, having contributed \$400 or paying the deficiency with 4 per cent interest. One year on leave of absence for professional preparation may be counted in time of service. 2. Retirement for disability after 15 years' service in public schools of U. S., of which three-fifths is in Illinois, having contributed \$400 or paying the deficiency with 4 per cent interest. 3. Being annuitant under teachers' fund already established.		Transfers to this fund teachers' funds already established. Pensions are suspended if pensioner resumes teaching in public schools.



APPENDIX B.

TABULAR DIGEST OF PENSION LAWS IN FORCE IN
ILLINOIS, JANUARY 1, 1916.

NOTE 1.—Act of 1915, under which policemen in employ of Boards of Park Commissioners are beneficiaries, to be in force and effect, requires consent of Board of Park Commissioners. Such consent has not been given as yet by any Board. (August 1, 1916.)

NOTE 2.—Act under which fire insurance patrolmen in employ of Boards of Underwriters in cities of more than 50,000 inhabitants are beneficiaries, does not provide for the expenditure of any public moneys.

NOTE 3.—Act under which officers and employees of counties of more than 150,000 inhabitants are beneficiaries, was declared invalid by Judge Charles Foell in the Superior Court of Cook County on August 2, 1916, on the ground that it includes county officers who are not under civil service.

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Policemen in employ of Boards of Park Commissioners (Act of 1915)	248 to 253 inclusive.
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TABULAR DIGEST OF PENSION LAWS

Laws.	Beneficiaries.	Management.
Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 292.	Firemen in cities of more than 5,000 inhabitants. (Participation compulsory.)	Board of eight trustees: In cities, villages or incorporated towns where there are such officers, the treasurer, clerk, marshal or chief officer of fire department, and comptroller are ex officio members. Where there is no comptroller, the mayor of the city is substituted. In other villages or incorporated towns, the president of the board of trustees of such village or town, the clerk and attorney of such village or town, and chief officer of fire department are ex officio members. [\$2.] In all cities, villages and towns, three of the active firemen, elected by the active force, and one from the pensioners elected by retired firemen, each for a term of 2 years. [\$2.] Treasurer of city, village or town is custodian of fund. [\$9.]
Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 304.	Policemen in cities of more than 200,000 inhabitants. (Participation compulsory.)	Board of five trustees: Three residents of the county, appointed by the mayor for a term of 3 years; one of the active force elected by the active force, and one from the pensioners elected by retired policemen, widows of deceased pensioners who are pensioners, and guardians of children who are pensioners, each for a term of 1 year. [\$2.] Members appointed by the mayor can not hold any other civil office or position during the term. [\$2.] Treasurer of board of trustees is custodian of fund. [\$10.]
Act approved, April 29, 1887. In force, July 1, 1887. As amended, June 13, 1913. In force, July 1, 1913. Hurd, 1913, p. 378, par. 391.	Policemen in cities of 50,000 or more inhabitants. (Participation compulsory.)	Board of five trustees: Three residents of the county in which city is located, appointed by the mayor for terms of 3 years. (Terms alternate.) [\$2.] One of the active force elected by the active force; one pensioner elected by retired policemen, widows of deceased pensioners who are pensioners, and guardians of children who are pensioners, each for a term of 1 year. [\$2.] Members appointed by the mayor can not hold any elective or appointive office during term. [\$2.] Treasurer of board of trustees is custodian of fund. [\$9.]
Act approved, June 14, 1909. In force, July 1, 1909. As amended, June 27, 1913. In force, July 1, 1913. Hurd, 1913, p. 383, par. 402(a).	Policemen in cities of not less than 9,000 nor more than 50,000 inhabitants. (Participation compulsory.)	Board of three trustees: Two residents of city, village or town, appointed by the mayor for terms of 2 years. (Terms alternate.) One, either of active force or a pensioner, elected by members of active force and pensioners for a term of 1 year. [\$2.] Treasurer of city, village or town is custodian of fund. [\$11.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

SOURCES OF REVENUE.

From employees.	From other sources.	Limitations of payments by employees.	Refunds.
Not to exceed 1 per cent of salaries. [\$3.]	<p>Tax levy of not to exceed three-tenths of a mill on the dollar on all taxable property of such city, village or town for a period of 3 years beginning with the year 1915. [\$1.]</p> <p>One per cent of all licenses, excepting those of public utilities. All fines imposed for violations of fire ordinances, enforcements of which are under supervision of fire department. [\$1.]</p> <p>Amounts received as rewards, gifts, etc., except when allowed to be retained. All fines and penalties imposed upon firemen. [\$4.]</p> <p>All of tax or license fee collected from foreign fire insurance companies may be appropriated. [Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 284.]</p>	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$3.]	No provisions.
Two per cent of salaries. [\$9.]	<p>Tax levy of not to exceed seven-tenths of a mill on the dollar on all taxable property of the city for a period of 3 years beginning with the year 1915. [\$9.]</p> <p>Amounts received as rewards, gifts, etc., except when allowed to be retained by policeman or given to endow a medal, etc. Amounts paid for special details; fines imposed on policemen for violations of rules and regulations of department, and moneys received from sales of unclaimed or stolen property. [\$10.]</p> <p>In event tax is not levied, a sum sufficient for the purpose of this act shall be provided from money collected for licenses of all kinds, excepting those of public utilities. [\$9.]</p>	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$9.]	No provisions.
One and one-half per cent of salaries, not to exceed \$3 per month. [\$1.]	<p>Seventy-five per cent of dog licenses. Four per cent of saloon licenses. [\$1.]</p> <p>All money collected for special details of police officers. Fines imposed upon policemen for violations of rules or regulations of police department. Proceeds from sales of unclaimed, lost or stolen property. Twenty-five per cent of pawnbrokers', junk dealers' and secondhand dealers' licenses. All of fines for carrying concealed weapons. One-half of costs collected for violations of city ordinances. All rewards given or paid to policemen, except such as they are permitted by chief officers to retain. Three per cent (not to exceed \$50,000 per annum) of all money collected for licenses not mentioned in this act. [\$1.]</p> <p>Seventy-five per cent of dog licenses. Two per cent of saloon licenses. [\$1.]</p>	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$1.]	No provisions.
One per cent of salaries. [\$1.] One per cent of pensions. [\$1.]	<p>All money collected for special details of police. Ten per cent of all fines collected for violations of city ordinances. All fines imposed upon police officers for violations of rules and regulations of police department. All rewards given or paid to police, except those excepted by the board of trustees. (This provision does not apply in cities which have not adopted civil service in police departments.) Ten per cent of all licenses not otherwise mentioned herein. All money accumulated for a police pension fund, and one-half of all money accumulated for a police and firemen's pension fund under any previous legislation. [\$1.]</p> <p>LIMITATION: If sum total of sources of revenue in a particular year exceed \$2,500, reduction to that figure shall be made by scaling the amount to be appropriated from saloon licenses. [\$1.]</p>	Deductions from salaries from date of entrance into service to date of pension, with limitation that they shall not exceed \$1 per month; and deductions from pensions during pension period, without limitation. [\$1.]	No provisions.

TABULAR DIGEST OF PENSION LAWS
EMPLOYEES.

Beneficiaries.	Conditions for pension.			Amount of pension per year.	Provisions for discontinuance of pension.
	Service.	Age.	Disability.		
Firemen in cities of more than 5,000 inhabitants.	Minimum 20 years, the last two of which must be continuous. [\$7.]	No requirement.	Pension awarded at any time that physical or mental disability renders retirement from active service necessary. [\$5.]	One-half of salary at date of retirement. [\$5 and 7.]	Pension terminates when disability ceases. (Member shall be restored to department at former rank or grade.) [\$5.]
Police-men in cities of more than 200,000 inhabitants.	Minimum 20 years. Period of service in city fire department may be included in computing term of total service. [\$3 and 8.]	No requirement.	Pension awarded at any time if disability occurs when in, and in consequence of, the performance of duty. [\$4.] If policeman becomes insane after 10 years of service, a pension is paid to wife, or if no wife then to child or children under 16 years of age. [\$4 and 6.]	Service pensioners receive one-half salary of rank held for 1 year immediately prior to retirement [\$3]; disability pensioners receive one-half salary at date of disability, — both with minimum of \$600 and maximum of \$900. [\$3 and 4.]	If retired for disability: Pension terminates when disability ceases (member shall be restored to department at former rank) [\$4]; or if pensioner fails to submit to physical examination as to fitness for duty, or shall disobey requirements of board relating thereto. [\$6.] If retired for either service or disability: Pension terminates if pensioner is convicted of felony, or becomes a habitual drunkard, or nonresident of the United States. [\$6.]
Police-men in cities of 50,000 or more inhabitants.	As in case of Chicago policemen above. [\$3.]	No requirement.	As in case of Chicago policemen above. [\$4 and 6.]	As in case of Chicago policemen above. [\$3 and 4.]	As in case of Chicago policemen above. [\$4, 7 and 8.]
Police-men in cities of not less than 9,000 nor more than 50,000 inhabitants.	Minimum 20 years. [\$3.]	Minimum 50 years. [\$3.]	Pension awarded at any time if disability occurs when in, and in consequence of, performance of duty. Pension payable during time that officer is compelled to suspend performance of duty or retire from the force. [\$4.]	Service pensioners receive one-half salary of rank held for 1 year immediately prior to retirement [\$3]; disability pensioners receive one-half salary at date of retirement, — both with maximum of \$900. [\$4.]	If retired for disability: Pension terminates when disability ceases and member resumes performance of duty. [\$4.] In all cases, if pensioner is convicted of felony, or becomes a habitual drunkard, or becomes a nonresident of this State without permission, or fails to report for examination as to fitness for duty, or fails to obey the orders of the chief of police or the board of trustees regarding such examination. [\$9.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

WIDOWS OF EMPLOYEES.

Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
If husband dies from any cause while in active service, or if husband dies during retirement after 20 years of service, provided marriage took place before date of retirement. [\$6.]	\$540. [\$6.]	In all cases, pensions terminate on marriage. [\$6.]
<p>1. If husband was retired on service pension, provided marriage took place at least 6 months before date of retirement. [\$3.]</p> <p>2. If husband was retired on disability pension, provided marriage took place before date of retirement. [\$4.]</p> <p>3. If husband lost his life in performance of duty. No restriction as to date of marriage. [\$5.]</p> <p>4. If husband died from any cause after 10 years of service, provided marriage took place at least 2 months before date of death. [\$5.]</p>	<p>1. Same as was paid to husband. [\$3.]</p> <p>2. Same as was paid to husband. [\$4.]</p> <p>3. Same rate as in 2 above. [\$5.]</p> <p>4. Same rate as in 1 above. [\$5.]</p>	In all cases, pensions terminate on marriage. [\$3, 4 and 5.]
<p>1. If husband was retired on service pension, provided marriage took place before date of retirement. [\$3 and 6.]</p> <p>2. If husband was retired on disability pension, without restriction as to date of marriage. [\$4.]</p> <p>3. If husband lost his life in performance of duty, without restriction as to date of marriage. [\$6.]</p> <p>4. If husband died from any cause after 10 years or more of service, without restriction as to date of marriage. [\$6.]</p>	<p>1. Same as was paid to husband. [\$3.]</p> <p>2. Same as was paid to husband. [\$4.]</p> <p>3. Same rate as in 2 above. [\$6.]</p> <p>4. Same rate as in 2 above. [\$6.]</p>	<p>In all cases, pensions terminate upon marriage. [\$3 and 6.]</p> <p>Pension terminates if pensioner is convicted of felony, or if she becomes a habitual drunkard or a nonresident of the United States. [\$8.]</p>
<p>1 and 2. If husband was pensioned because of service or disability, provided marriage took place before retirement. [\$6.]</p> <p>3. If husband lost his life in performance of duty, without restriction as to date of marriage. [\$6.]</p> <p>4. If husband died from any cause after 10 years of service, without restriction as to date of marriage. [\$6.]</p>	<p>1 and 2. Same as was paid to husband. [\$6.]</p> <p>3. Same rate as in 2 above. [\$6.]</p> <p>4. Same rate as in 1 above. [\$6.]</p>	<p>In all cases, pensions terminate upon marriage. [\$3 and 6.]</p> <p>Pension terminates if pensioner is convicted of felony or becomes a habitual drunkard, or if she becomes a nonresident of this State without permission. [\$9.]</p>

TABULAR DIGEST OF PENSION LAWS
NATURAL CHILD OR CHILDREN OF EMPLOYEES.

Beneficiaries.	Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
Firemen in cities of more than 5,000 inhabitants.	In all cases, must be under 16 years of age. [§6.] Beneficiaries are children of service pensioners or of members who die while in active service. [§6.]	\$96 to each child if mother is alive; \$180 to each child if mother is dead. [§6.]	In all cases, pension terminates when child attains 16 years of age. [§6.]
Police-men in cities of more than 200,000 inhabitants.	In all cases, must be under 16 years of age. [§§3, 4 and 5.] Children of service pensioner; children of policeman killed in performance of duty; children of policeman who dies after 10 or more years of service: If no widow survives or if surviving widow dies or marries. [§§3, 4 and 5.] Children of policeman who becomes insane after 10 or more years of service: If there is no wife and he has not been taken out of the State [§5.]	In all cases, families receive amounts equal to the pension provided for deceased father or the mother, to be divided equally among those under 16 years of age. [§§3, 4 and 5.]	In all cases, pension terminates when child attains 16 years of age. [§§3, 4 and 5.] In case of insane policeman, pension rights cease if policeman is taken outside the State. [§5.]
Police-men in cities of 50,000 or more inhabitants.	As in Chicago policemen above. [§§ 3, 4 and 6.]	As in Chicago policemen above. [§§3, 4 and 6.]	In all cases, pension terminates when child attains 16 years of age. [§§3, 4 and 6.] In case of insane policeman, when he is restored to reason or taken outside of the State. [§6.] In case of children of policeman killed in performance of duty, if child marries. [§6.] Pension terminates if child is convicted of felony or becomes a habitual drunkard, or a nonresident of the United States. [§8.]
Police-men in cities of not less than 9,000 nor more than 50,000 inhabitants.	In all cases, must be under 16 years of age. [§§3 and 6.] Children of service or disability pensioner: If no widow survives or if surviving widow dies or marries, provided father did not marry after retirement. [§§3 and 4.] Children of policeman killed in performance of duty; children of policeman who died after 10 years or more of service: If no widow survives or if surviving widow dies or marries. [§6.]	Same as in Chicago policemen above. [§§3 and 6.]	In all cases, pension terminates when child attains 16 years of age, or if child marries. [§§3 and 6.] In all cases, pension terminates if pensioner is convicted of felony or becomes a habitual drunkard, or if child becomes a nonresident of the State without permission. [§9.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

Other dependents of employees.	Additional data.
<p>If member dies from any cause while in active service or during retirement after 20 years of service, and leaves no widow or natural children, dependent father and mother each receive \$25 per month, provided member was sole and only support of such parent or parents. [§6.]</p>	<p>Repeals act approved May 13, 1887, and all amendments thereto. [§14.] This act makes no provision regulating investment of funds, except that treasurer shall not loan or deposit unless authorized by board. [§11.]</p>
<p>If employee becomes insane after 10 years of service, wife receives a pension equal to one-half of husband's salary at date of insanity with minimum of \$600 and maximum of \$900. [§5.] Pension ceases if employee is taken outside the State. [§5.]</p>	<p>The law provides for actuarial determination of amount needed to pay pensions currently and for maintenance of a reserve fund in accord with actuarial estimates for those policemen entering the service after January 1, 1916. (NOTE.—The law is silent as to the standards to be employed in making an actuarial determination.) This act supersedes the act passed April 27, 1887, in force July 1, 1887, as subsequently amended regarding cities of more than 200,000 inhabitants. [§7.] Funds may be invested in Federal bonds or State, county, township or municipal bonds of Illinois. [§10.]</p>
<p>As in Chicago policemen above. [§6.]</p>	<p>All policemen retired for causes other than 20 years of service, must, unless excused, report monthly to the chief of police, and may be assigned to perform emergency duties, and must perform same. They shall have no claim to payment for performance of such duty. [§7.] Benefits shall be scaled pro rata, if money in fund is insufficient to pay benefits in full. [§12.] Funds may be invested in interest-bearing bonds of the United States, State of Illinois, or any county, township or municipal corporation in the State of Illinois. [§10.]</p>
<p>When employee lost life in performance of duty, or was pensioned because of age and length of service, or because of disability, if no eligible widow or child under 16 years of age survives pension is payable to dependent parents if such there be, provided such parent does not marry subsequent to death of member, and provided member did not marry subsequent to retirement. [§6.] Pension terminates if parent is convicted of felony or becomes a habitual drunkard, or if parent becomes a non-resident of this State without permission so to be. [§9.]</p>	<p>Benefits shall be scaled pro rata, if money in fund is insufficient to pay benefits in full. [§12.] No deductions from salaries in cities that have not adopted civil service in their police departments. [§1.] Investments are limited to bonds of the United States, State of Illinois and municipalities in Illinois. [§10.]</p>

TABULAR DIGEST OF PENSION LAWS

Laws.	Beneficiaries.	Management.
Act approved, May 23, 1913. Hurd, 1913, p. 1807, par. 337.	Policemen in employ of boards of park commissioners. (Participation compulsory.)	Board of five trustees, all of whom must be residents of the town or towns comprising park district: Three appointed by the president of the board of park commissioners for terms of 3 years (one appointed each year). One of the active force elected by the active force, and one retired policeman elected by retired policemen, widows of deceased pensioners and guardians of children of deceased pensioners who are pensioners, each for a term of 1 year. [\$2.] The board of trustees elects one of its members as secretary and treasurer, who is custodian of fund. [\$9.]
Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 542.	Policemen in employ of boards of park commissioners. (Participation compulsory.)	Board of five trustees, all of whom must be residents of the town or towns comprising park district: Three, not holding any appointive or elective political offices or positions, appointed by the president of the board of park commissioners, for terms of 3 years (one appointed each year). One of the active force elected by the active force, and one retired policeman elected by retired policemen, widows of deceased pensioners and guardians of pensioned children of deceased pensioners, each for a term of 1 year. [\$2.] The board of trustees elects one of its members as secretary and treasurer, who is custodian of fund. [\$7.]
Act approved, June 24, 1895. In force, July 1, 1895. Hurd, 1913, p. 393, par. 423.	Fire insurance patrolmen in employ of boards of underwriters in cities of more than 50,000 inhabitants. (Participation compulsory.)	Board of five trustees, composed of president, secretary, treasurer, chairman of the patrol committee and superintendent or chief officer of the fire insurance patrol of the board of underwriters. [\$1.] Treasurer of board of trustees is custodian of fund. [\$9.]
Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 342.	Officers and employees of counties of more than 150,000 inhabitants. (Participation compulsory.)	Board of five trustees: County comptroller and county treasurer, ex officio. Three employees for terms of 3 years, one elected each year by employees. [\$2.] County treasurer is custodian of fund. [\$5.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

SOURCES OF REVENUE.

From em- ployees.	From other sources.	Limitations of pay- ments by employees.	Refunds.
One and one-half per cent of salaries, not to exceed \$3 per month. [\$1.]	All fines and penalties imposed upon persons arrested by any member of force. [\$1.] All rewards paid or given to members, except such as are excepted by chief officers of force. [\$1.] All fines for infraction of rules and regulations of department. [\$1.]	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$1.] Deductions not to exceed \$3 per month. [\$1.]	No provisions.
Two per cent of salaries. [\$8.]	Tax levy on each dollar of taxable property in various park districts for a period of 3 years beginning with the year 1915 as follows: South Park (Chicago), one-twenty-fifth of a mill; West Chicago Park, one-tenth of a mill; Lincoln Park (Chicago), one-seventeenth of a mill. [\$8.] All rewards paid or given to members, except such as are allowed to be retained by such members. [\$9.]	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$8.]	No provisions.
Not to exceed one per cent of salaries. [\$2.]	A sum not in excess of 2 per cent of all money paid to the treasurer of the fire insurance patrol by insurance companies for support of said patrol. [\$2.] Amounts received as rewards, gifts, etc., except when allowed to be retained by patrolman or given to endow a medal or other competitive award. [\$3.]	Deduction from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$2.]	No provisions.
\$2 per month. [\$1.]	Amounts received as gifts, etc. [\$4.]	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service or amounts to be received as pensions. [\$1.]	In case of separation from service on account of abolition of position, a sum equal to full amount deducted with interest at 3 per cent per annum. [\$4.]

TABULAR DIGEST OF PENSION LAWS
EMPLOYEES.

Beneficiaries.	Conditions for pension.			Amount of pension per year.	Provisions for discontinuance of pension
	Service.	Age.	Disability.		
Policemen in employ of boards of park commissioners. (Act of 1913.)	Minimum 20 years. [\$3.]	No requirement.	Pension awarded at any time if disability occurs while serving as a policeman. [\$4.] If policeman becomes insane after 10 years of service, a pension is paid to widow (wife), or if no wife, then to child or children under 16 years of age, or if none such, then to father or mother. [\$6.]	Service pensioners receive one-half of salary of rank held for one year prior to retirement [\$31]; disability pensioners receive one-half of salary at date of retirement, — both with minimum of \$800 and maximum of \$900. [\$4.]	If retired for disability: Pension terminates when disability ceases [\$4]; or if pensioner fails to report for examination for duty or disobeys an order so to report or an order to report for duty. [\$8.] In all cases pension terminates upon conviction of felony, or if pensioner becomes a habitual drunkard or nonresident of this State. [\$8.]
Policemen in employ of boards of park commissioners. (Act of 1915.)	Minimum 20 years. [\$3.]	Minimum 50 years. [\$3.]	Pension awarded at any time if disability occurs while serving as a policeman. [\$4.] If policeman becomes insane after 10 years of service, a pension is paid to wife, or if no wife, then to child or children. [\$5.]	Same as in park police above. [\$3 and 4.]	Same as in park police above, except that residence is permitted in any part of the United States. [\$4 and 6.]
Fire insurance patrolmen in employ of boards of underwriters in cities of more than 50,000 inhabitants.	Minimum 22 years, last two continuous. [\$7.]	Minimum 50 years. [\$7.]	Pension awarded at any time if physically or mentally permanently disabled by reason of service so as to render retirement necessary. [\$5.]	One-half of salary at date of retirement. [\$55 and 7.]	No provisions.
Officers and employees of counties of more than 150,000 inhabitants.	Minimum 20 years. [\$7.]	Minimum 55 years. [\$7.]	Pension awarded at any time after 5 years of service rendered subsequent to July 1, 1915. [\$9.]	\$600. [\$4.]	Pension terminates when disability ceases. [\$4.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

WIDOWS OF EMPLOYEES.

Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
<p>1 and 2. If husband was pensioned because of service or disability incurred as a result of injuries received in the discharge of duty, provided marriage took place before retirement. [§§3 and 4.]</p> <p>3. If husband lost his life in performance of duty. [§6.]</p> <p>4. If husband died after 10 or more years of service. [§6.]</p>	<p>1 and 2. Same as was paid to husband. [§§3 and 4.]</p> <p>3. Same rate as in 2 above. [§6.]</p> <p>4. Same rate as in 1 above. [§6.]</p>	<p>In all cases, pensions terminate upon marriage. [§§3 and 6.]</p> <p>In all cases, pensions terminate upon conviction of felony, or if pensioner becomes a habitual drunkard or a non-resident of this State. [§8.]</p>
<p>1. If husband was retired on service pension, provided marriage took place at least 6 months before retirement. [§3.]</p> <p>2. If husband was retired on disability pension, provided marriage took place before date of retirement. [§4.]</p> <p>3. If husband lost his life in performance of duty. [§5.]</p> <p>4. If husband lost his life after 10 years of service, provided marriage took place at least 6 months before date of death. [§5.]</p>	<p>1. Same as was paid to husband. [§3.]</p> <p>2. Same as was paid to husband. [§4.]</p> <p>3. Same rate as in 1 above. [§5.]</p> <p>4. Same rate as in 2 above. [§5.]</p>	<p>In all cases, pensions terminate upon marriage. [§§3, 4 and 5.]</p>
<p>If husband died while in service or after retirement on pension without restriction as to date of marriage. [§6.]</p>	<p>\$360. [§6.]</p>	<p>In all cases, pensions terminate upon marriage. [§6.]</p>
<p>No provisions.</p>	<p>No provisions.</p>	<p>No provisions.</p>

TABULAR DIGEST OF PENSION LAWS
NATURAL CHILD OR CHILDREN OF EMPLOYEES.

Beneficiaries.	Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
Policemen in employ of boards of park commissioners. (Act of 1913.)	<p>In all cases, must be under 16 years of age. [§§3 and 6.]</p> <p>Children of service or disability pensioner: If no widow survives or if surviving widow dies or marries. [§§3 and 4.]</p> <p>Children of policeman killed in performance of duty: If no widow survives or if surviving widow dies or marries. [§6.]</p> <p>Children of policeman who died after 10 years of service: If no widow survives or if surviving widow dies or marries. [§6.]</p> <p>If father becomes insane after 10 years of service, having no wife. [§6.]</p>	<p>In all cases, families receive amounts equal to the pension provided for deceased father or the mother divided equally among those under 16 years of age. [§§3, 4 and 6.]</p>	<p>In all cases, pension terminates when child attains 16 years of age. [§§3 and 6.]</p> <p>Pension terminates upon marriage in all cases except those of children of service pensioners. [§6.]</p> <p>In all cases, pension terminates if child is convicted of felony or becomes a habitual drunkard or a non-resident of this State. [§8.]</p>
Policemen in employ of boards of park commissioners. (Act of 1915.)	<p>In all cases, must be under 16 years of age. [§3, 4 and 5.]</p> <p>Children of service pensioners: If no eligible widow survives or if such widow dies. [§3.]</p> <p>Children of disability pensioners: If no eligible widow survives or if such widow dies or marries. [§4.]</p> <p>Children of policeman killed in performance of duty: If no widow survives or if surviving widow dies. [§§3 and 5.]</p> <p>Children of policeman who died after 10 or more years of service: If no eligible widow survives or if such widow dies. [§5.]</p> <p>Children of insane policeman: If no wife is living and he has not been taken outside the State. [§5.]</p>	<p>As in park police above. [§§3, 4 and 5.]</p>	<p>In all cases, pension terminates when child attains 16 years of age. [§§3, 4 and 5.]</p>
Fire insurance patrolmen in employ of boards of underwriters in cities of more than 50,000 inhabitants.	<p>In all cases, must be under 16 years of age. [§6.]</p> <p>If father dies while in service or during retirement on pension. [§6.]</p>	<p>\$72. [§6.]</p>	<p>In all cases, pension terminates when child attains 16 years of age. [§6.]</p>
Officers and employees of counties of more than 150,000 inhabitants.	<p>No provisions.</p>	<p>No provisions.</p>	<p>No provisions.</p>

IN FORCE IN ILLINOIS JANUARY 1, 1916.

Other dependents of employees.	Additional data.
<p>If there be no widow or no child or children under 16 years of age of deceased member, then his father or mother receives pension provided for widow or children. [§§3 and 6.]</p> <p>If member becomes insane after 10 years of service, wife receives pension equal to one-half of salary of husband at date of insanity, within the limits of \$800 and \$900. [§6.]</p>	<p>Pensioners other than service pensioners shall report monthly unless excused by the superintendent of police. They may be assigned to, and must perform, such service as commanding officer directs and shall have no claim for payment for such duty. [§7.]</p> <p>Funds may be invested in bonds of the United States, State of Illinois or any county, township or municipal corporation of the State of Illinois. [§10.]</p>
<p>If employee becomes insane after 10 years of service, wife receives a pension equal to one-half of husband's salary at date of insanity, not to exceed \$900. [§5.]</p> <p>Pension ceases if such employee is taken outside of the State. [§5.]</p>	<p>The law provides for actuarial determination of amount needed to pay pensions currently and for maintenance of a reserve fund in accord with actuarial estimates for those policemen entering the service after January 1, 1916. [§8.]</p> <p>(NOTE.—The law is silent as to the standards to be employed in making an actuarial determination.)</p> <p>Should any policeman or his heirs receive any compensation or allowance from any board of park commissioners under, or in pursuance of, the laws of the United States, or of this State, now or hereafter in force, the pension herein provided shall be reduced by the amount of such allowance if paid in installments, or if payable otherwise, no pension shall be paid to such policeman, his widow, child or children until such time as pension would amount to the same sum had it been paid to them. [§6.]</p> <p>Funds may be invested in bonds of the United States, or State, county, township or municipal bonds of Illinois. [§9.]</p> <p>To be in force and effect this act requires consent of board of park commissioners expressed by resolution or otherwise, which must be recorded in the office of the recorder of deeds of county. [§11.]</p>
<p>Provisions for natural children apply also to adopted children. [§6.]</p>	<p>Funds may be invested in securities approved by the board of trustees. [§4.]</p>
<p>No provisions.</p>	<p>This fund includes all employees of a county except temporary or probationary employees; those who were 60 or more years of age on July 1, 1915, who had not served the county for at least 10 years; and laborers except such as apply for participation. [§1.]</p> <p>Funds may be invested in Federal, State, township or municipal bonds issued in the United States. [§4.]</p>

TABULAR DIGEST OF PENSION LAWS

Laws.	Beneficiaries.	Management.
<p>Act approved, May 31, 1911. In force, July 1, 1911. Hurd, 1913, p. 483, par. 741. As amended, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, pp. 298 and 302.</p>	<p>Employees of cities of more than 100,000 inhabitants. (Participation compulsory.)</p>	<p>Board of five trustees: City comptroller and city treasurer, ex officio. Three employees elected by the employees for terms of 3 years, one elected each year. [\$2.] (Elective trustees can not hold political office or appointment.) [\$2.] City treasurer is custodian of fund. [\$5.]</p>
<p>Act approved, May 15, 1903. In force, July 1, 1903. Hurd, 1913, p. 2255, par. 423 (a).</p>	<p>Employees of boards of education in cities of more than 100,000 inhabitants, who are engineers, janitors or office employees earning over \$49 per month. (Participation optional.)</p>	<p>Board of six trustees: [\$4.] President and secretary of board of education, ex officio. Four contributors elected by contributors for terms of 2 years, two elected each year. [\$5.] City treasurer is custodian of fund. [\$3.]</p>
<p>Act approved, May 12, 1905. In force, July 1, 1905. As amended, June 3, 1907. In force, July 1, 1907. Hurd, 1913, p. 1552, par. 43.</p>	<p>Employees of public library boards in cities of more than 100,000 inhabitants. (Participation optional.)</p>	<p>Board of five trustees: President and secretary of board of directors of library, ex officio. One other member of the board of directors elected for a term of 1 year by contributors. Two contributing employees elected by contributors, each for a term of 2 years. [\$5.] City treasurer is custodian of fund. [\$3.]</p>
<p>Act approved, June 29, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 465.</p>	<p>Employees of houses of correction in cities of more than 150,000 inhabitants, who are employed under Civil Service Act, or appointed before it was passed and in service July 1, 1911, except temporary, probationary and 60-day employees, and those who on July 1, 1915, are 50 or more years of age and have served less than 10 years. (Participation optional.)</p>	<p>Board of five trustees: Chairman of board of inspectors of houses of correction and superintendent of houses of correction, ex officio. Two contributors elected by contributors for terms of 2 years. (Terms alternate). One beneficiary elected annually by pensioners. [\$4.] City treasurer is custodian of fund. [\$3.]</p>

IN FORCE IN ILLINOIS JANUARY 1, 1916.

SOURCES OF REVENUE.

From em- ployees.	From other sources.	Limitations of payments by employees.	Refunds.
\$2 per month. [§1.]	City appropriates an amount equal to sum deducted from salaries of employees during previous calendar year, for a period of 2 years beginning January 1, 1916. (§1 as amended. Laws of Ill., 1915, p. 298.) Amounts received as gifts, etc. [§4.]	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service. If retired because of age and service before the sum of \$480 has been contributed, the balance plus 5 per cent interest is deducted from pension in 36 equal monthly installments. [§7.]	In case of separation from service on account of abolition of position, a sum equal to amount contributed. [§4.] In case of death or separation from service for any cause other than that above, one-half of amount contributed. [§4.]
Not less than \$12 nor more than \$48 per year. [§6.]	Board of education has power to appropriate double the sum contributed by employees each year. [Act of June 27, 1913. In force, July 1, 1913. Hurd, 1913, p. 2235, par. 278 (a).] [NOTE.—At present, board and employees contribute equal amounts. (Aug. 1, 1916.)]	Deductions from salaries from date of entrance into service to date of pension. [§10.] Minimum: The equivalent of 5 years' contributions. [§9.]	One-half of sum contributed if employee resigns or is dismissed before serving 10 years. [§13.]
Not less than \$6 nor more than \$48 per year. [§6.]	Such moneys from miscellaneous sources as board of directors of library may determine. [§1.] [NOTE.—At present, fund receives all of fines collected for retention of books overtime. (Aug. 1, 1916.)]	Deductions from salaries from date of entrance into service to date of pension. [§1.]	One-half of sum contributed if employee resigns or is dismissed. [§11.]
Two per cent of salaries. [§1.]	Three per cent of gross earnings of houses of correction, 3 per cent of fines and costs collected for violations of city ordinances where persons have been incarcerated in houses of correction for nonpayment of such fines and costs. Both of these sources of revenue for a period of 3 years only, beginning with the year 1915. [§1.] Amounts received in gifts, etc. [§6.]	Deductions from salaries from date of entrance into service to date of pension, without regard to number of years of service. [§1.]	One-half of the sum contributed if employee resigns or is dismissed after 3 or more years of contribution. [§2.]

TABULAR DIGEST OF PENSION LAWS
EMPLOYEES.

Beneficiaries.	Conditions for pension.			Amount of pension per year.	Provisions for discontinuance of pension.
	Service.	Age.	Disability.		
Employees of cities of more than 100,000 inhabitants.	Minimum 20 years except when Civil War veterans. [\$7 and 9½.]	Minimum 55 years. [\$7.]	Pension awarded at any time after 5 years of service rendered subsequent to July 1, 1911. [\$4.]	\$600. [\$4.]	Pension terminates when disability ceases. [\$9.]
Employees of boards of education in cities of more than 100,000 inhabitants, who are engineers, janitors or office employees earning over \$49 per month.	1. Minimum 20 years. [\$11.] 2. Minimum 10 years. [\$7.]	1. No requirement. [\$11.] 2. Minimum 55 years. [\$7.]	Pension awarded at any time after 10 years of service. [\$12.]	Board of trustees determines amount but within maximum of \$600. [\$6.] If pensioned because of disability, such sum as board of trustees may determine. [\$12.]	Pension terminates when disability ceases or for other good cause as board of trustees shall determine. [\$6.]
Employees of public library boards in cities of more than 100,000 inhabitants.	1. Minimum 20 years. [\$9.] 2. Minimum 10 years. [\$7.]	1. No requirement. [\$9.] 2. Minimum 55 years. [\$7.]	Pension awarded at any time after 10 years of service. [\$10.]	Board of trustees determines amount but within maximum of \$600. [\$6.] If pensioned for disability, such sum as board of trustees determines. [\$6.]	Pension terminates when disability ceases or for other good cause as board of trustees shall determine. [\$6.]
Employees of houses of correction in cities of more than 150,000 inhabitants.	Minimum 20 years. [\$7 or \$9.]	No requirement.	Pension awarded at any time after 3 years of contribution to fund. [\$10.]	\$600. [\$10.]	Pension terminates when disability ceases or for other good cause, subject to the approval of the majority of the contributors to the fund. [\$9.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

WIDOWS OF EMPLOYEES.

Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
No provisions.	No provisions.	No provisions.
See additional data.	See additional data.	No provisions.
See additional data.	See additional data.	No provisions.
<p>(1) If husband was retired on service pension, provided marriage took place at least 5 years before his death [§8] and prior to retirement. [§2.]</p> <p>(2) If husband was retired on disability pension, provided marriage took place at least 5 years before his death. [§10.]</p> <p>(3) If husband died while a contributor, provided marriage took place at least 5 years before his death. [§8.]</p>	<p>1. \$600. [§8.]</p> <p>2. Same as in 1 above. [§10.]</p> <p>3. Same as in 1 above. [§10.]</p>	<p>In all cases pensions terminate upon marriage. [§8 and 10.]</p>

TABULAR DIGEST OF PENSION LAWS
NATURAL CHILD OR CHILDREN OF EMPLOYEES.

Beneficiaries.	Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
Employees of cities of more than 100,000 inhabitants.	No provisions.	No provisions.	No provisions.
Employees of boards of education in cities of more than 100,000 inhabitants, who are engineers, janitors or office employees earning over \$49 per month.	See additional data.	See additional data.	No provisions.
Employees of public library boards in cities of more than 100,000 inhabitants.	See additional data.	See additional data.	No provisions.
Employees of houses of correction in cities of more than 150,000 inhabitants.	Children under 16 years of age of deceased contributors or beneficiaries when no eligible widow survives. [§§8 and 10.]	\$600 per annum is divided equally among eligible children of family. [§§9 and 10.]	In all cases, pension terminates when child attains 16 years of age. [§§8 and 10.]

IN FORCE IN ILLINOIS JANUARY 1, 1916.

Other dependents of employees.	Additional data.
No provisions.	<p>Employee who has served 20 or more years may retire from service and retain right to pension by paying \$2 per month until attainment of age 55, provided that if sum deducted from the salary of such employee is less than \$480 at time of retirement from service, the balance shall be paid within 30 days from date of such retirement. [\$8.]</p> <p>This fund includes all employees who were appointed to their positions by virtue of the Civil Service Act of March 20, 1895, and those appointed prior to the passage of that act who are now in service, who are not participants in any other municipal pension fund, except temporary, probationary and 60-day employees, those who are less than 21 years of age, those who were 60 or more years of age on July 1, 1911, and who had not been in service at least 10 years, and laborers unless any such laborer has applied for participation as provided in the Act of July 1, 1911. [\$1.]</p> <p>Civil War veterans who have attained the age of 65 years may be pensioned after 10 years of service. [\$9½.]</p> <p>Funds may be invested in bonds of the United States, of the State of Illinois, of any county, township or municipal corporation in the United States, or any special assessment bonds or vouchers issued by the City of Chicago. [\$4.]</p>
No provisions.	<p>Upon death of contributor who had not been a beneficiary, widow receives sum not exceeding amount of benefit for 1 year. [\$7.]</p> <p>Upon death of contributor who has not been a beneficiary, provided there is no widow, board of trustees may expend a sum not exceeding the amount of 1 year's benefit for the benefit of any minor children of said contributor. [\$8.]</p> <p>Funds may be invested at discretion of board of trustees. [\$6.]</p>
No provisions.	<p>This act applies only to employees who receive stipulated annual salaries. [\$2.]</p> <p>Contributors may withdraw upon notice in writing to the board of trustees. [\$2.]</p> <p>Application for participation may be made within 6 months after entering service, or if not so made, within 3 years, upon payment of sum which would have been contributed from date of entering into service, or from date when law became effective. [\$9½.]</p> <p>Penalty of fine or imprisonment or both for interfering with or obstructing enforcement of act. [\$14.]</p> <p>Upon death of contributor who had not been a beneficiary, widow receives sum not exceeding one year's benefit. [\$8.]</p> <p>Funds may be invested at discretion of board of trustees. [\$6.]</p>
<p>Mother of deceased contributor or beneficiary, if no eligible widow or children survive, receives pension of \$600 per year as long as she lives. [\$58 and 10.]</p>	<p>Participant may withdraw from this fund upon giving notice in writing. [\$2.]</p> <p>No benefits to be paid until July 1, 1916. [\$10.]</p> <p>PENALTY: Fine of not less than \$50, nor more than \$100, or 6 months' imprisonment in county jail, or both, for interference with or obstruction of enforcement of provisions of this law. [\$15.]</p> <p>Credit for service prior to participation in this fund is given upon payment of 2 per cent of salary received during period of such service. [\$2.]</p> <p>If fund is insufficient to pay amount stated, level deductions shall be made. [\$7.]</p> <p>Funds may be invested in Federal, State, county or municipal bonds. [\$4.]</p>

TABULAR DIGEST OF PENSION LAWS

Laws.	Beneficiaries.	Management.
<p>Act approved, May 27, 1915. In force, July 1, 1915. Laws of Ill., 1915, p. 649.</p>	<p>Public school teachers, except those in cities and school districts of more than 65,000 inhabitants where teachers' pension funds were in operation July 1, 1915. (Participation optional to those in service prior to July 1, 1915; compulsory to others.)</p>	<p>Board of five trustees: The superintendent of public instruction, and the State treasurer, ex officio. Three others, contributors to the fund or annuitants, elected by such contributors and annuitants, one each year for a term of 3 years. [§§1, 2 and 3.] State treasurer is custodian of fund. [§6.]</p>
<p>Act approved, and in force, June 12, 1909. Amended, June 2, 1911. In force, July 1, 1911. Amended, June 6, 1911. In force, July 1, 1911. Amended, June 5, 1911. In force, July 1, 1911. Amended, June 26, 1913. In force, July 1, 1913. Hurd, 1913, p. 2210.</p>	<p>Public school teachers in cities of more than 100,000 inhabitants. (Participation optional to those in service prior to July 1, 1913, or those who re-enter service and who were employed therein before that date; compulsory to those who enter service for the first time after July 1, 1913.)</p>	<p>Board of nine trustees: Chairman of finance committee of board of education is ex officio member and president. Two members of board of education elected by said board for terms of 2 years, one elected each year. [§152.] Vacancies in such membership may be filled at any regular meeting of the board of education. [§152.] Six contributing teachers for terms of 3 years, two elected by contributors each year. [§152.] (Vacancies filled at time of next regular election.) [§152.] City treasurer is custodian of fund. [§160.]</p>
<p>Act approved, June 27, 1913. In force, July 1, 1913. Hurd, 1913, p. 2274.</p>	<p>Public school teachers in school districts of not less than 10,000 nor more than 100,000 inhabitants. (Participation compulsory.)</p>	<p>Board of either three or nine trustees: One-third of this board shall be members of the board of school inspectors, or governing body of school district, selected by such body. Two-thirds shall be contributing members of the active teaching force, elected by those of the active teaching force who are contributors, for terms fixed by the governing body of school district. [§2.] Treasurer of school district or of board of school inspectors is custodian of fund. [§10.]</p>

IN FORCE IN ILLINOIS JANUARY 1, 1916.

SOURCES OF REVENUE.

From employees.	From other sources.	Limitations of payments by employees.	Refunds.
First 10 years, \$1 per month; next 5 years, \$2 per month; next 10 years, \$6 per month. For 5 months only of each year. [\$13.]	An amount from the common school fund sufficient to meet all demands under this act, which amount until otherwise provided by law shall be one-tenth of a mill on the dollar of the assessed valuation of all taxable property in the State exclusive of cities and school districts not coming under the provisions of this act. [\$23.] Donations, legacies or other moneys received from any legal source or increment for the purposes of this fund. [\$24.]	Assessments cease after 25 years of service and contribution to fund. [\$25a.] (NOTE.—This makes a total contribution of \$400.) Before receiving pension because of disability, teacher must have paid the sum of \$400 into fund. [\$25c.] Teachers satisfying service and age requirements are eligible for pension upon payment into fund of a sum equal to that which such teacher would have paid had he or she been a contributor during period of past service with simple interest at 4 per cent per annum. [\$25b.]	One-half of sum paid if contributor ceases to teach in public schools before serving 15 years. [\$27.]
First 5 years, 50 cents per month; second 5 years, \$1 per month; third 5 years, \$1.50 per month. Thereafter, \$3 per month. (Deductions made during 10 months of school year.) [\$155.]	Interest upon tax levied for school purposes, not to exceed 1 per cent of total sum levied. [\$165.] Board of education must pay an amount which, added to the above, equals the sum contributed by teachers, and has power to pay an amount which, added to interest as stated, equals twice the amount contributed by teachers. [\$165a. Act of June 5, 1911. In force, July 1, 1911. As amended, June 27, 1913. In force, July 1, 1913. Hurd, 1913, p. 2215.]	Deductions from salaries from date of entrance into service to date of pension. [\$155.] Minimum contribution for service pensioners, \$450. [\$155.] No minimum contribution for disability pensioners. [\$153.]	In case of discharge before entitled to pension, full amount contributed. In case of voluntary resignation before completion of 15 years of service, one-half of amount contributed. [\$161.]
First 5 years, \$5 per annum; second 5 years, \$10 per annum; third 5 years, \$15 per annum. Thereafter, \$30 per annum. [\$5.]	An amount from the common school fund equal to one-tenth of a mill on each dollar of taxable property of the city and school district. [\$3. As amended, Laws of Ill., 1915, p. 648.] Donations, legacies, gifts, etc., paid into said fund in pursuance of any law now in force or hereafter enacted. [\$3. As amended, Laws of Ill., 1915, p. 648.]	Deductions from salaries from date of entrance into service to date of pension. [\$5.]	In case of discharge, full sum contributed. In case of voluntary resignation before completion of 15 years of service, one-half of sum contributed. [\$10.]

TABULAR DIGEST OF PENSION LAWS
EMPLOYEES.

Beneficiaries.	Conditions for pension.			Amount of pension per year.	Provisions for discontinuance of pension.
	Service.	Age.	Disability.		
Public school teachers, except those in cities and school districts of more than 65,000 inhabitants where teachers' pension funds were in operation July 1, 1915.	Minimum 25 years of service in the public schools of the United States, 15 of which have been spent in the public schools of this State. [\$25a.]	Minimum 50 years. [\$25a.]	Pension awarded after 15 years' service in the public schools of the United States, of which at least 9 have been spent in the public schools of this State. [\$25c.]	* Sixteen dollars per annum for each year of service, total not to exceed \$400 per annum. [\$26.]	If pensioned because of disability: Pension terminates when disability ceases. [\$25c.]
Public school teachers in cities of more than 100,000 inhabitants.	Minimum 25 years of service in the public schools of the United States, the last 15 of which have been served in such city. [\$157.]	No provisions.	Pension awarded after 15 years of service in the public schools of the United States, the last 9 of which have been served in such city. [\$157.]	Service pensioners: \$400. [\$153.] Disability pensioners: A sum proportional to the amount of contribution as related to the sum of \$450. [\$153.]	No provisions.
Public school teachers in school districts of not less than 10,000 nor more than 100,000 inhabitants.	Minimum 25 years, at least 15 of which must be in district under the provisions of this act. [\$7.]	In general, no requirement. See additional data.	Pension awarded after 15 years of service, at least 9 of which must have been in district under the provisions of this act. [\$7.]	Service pensioners: Not to exceed \$400. [\$8.] Disability pensioners: A sum proportionate to the amount of contribution as related to the sum of \$400. [\$8.]	No provisions.

IN FORCE IN ILLINOIS JANUARY 1, 1916.

WIDOWS OF EMPLOYEES.

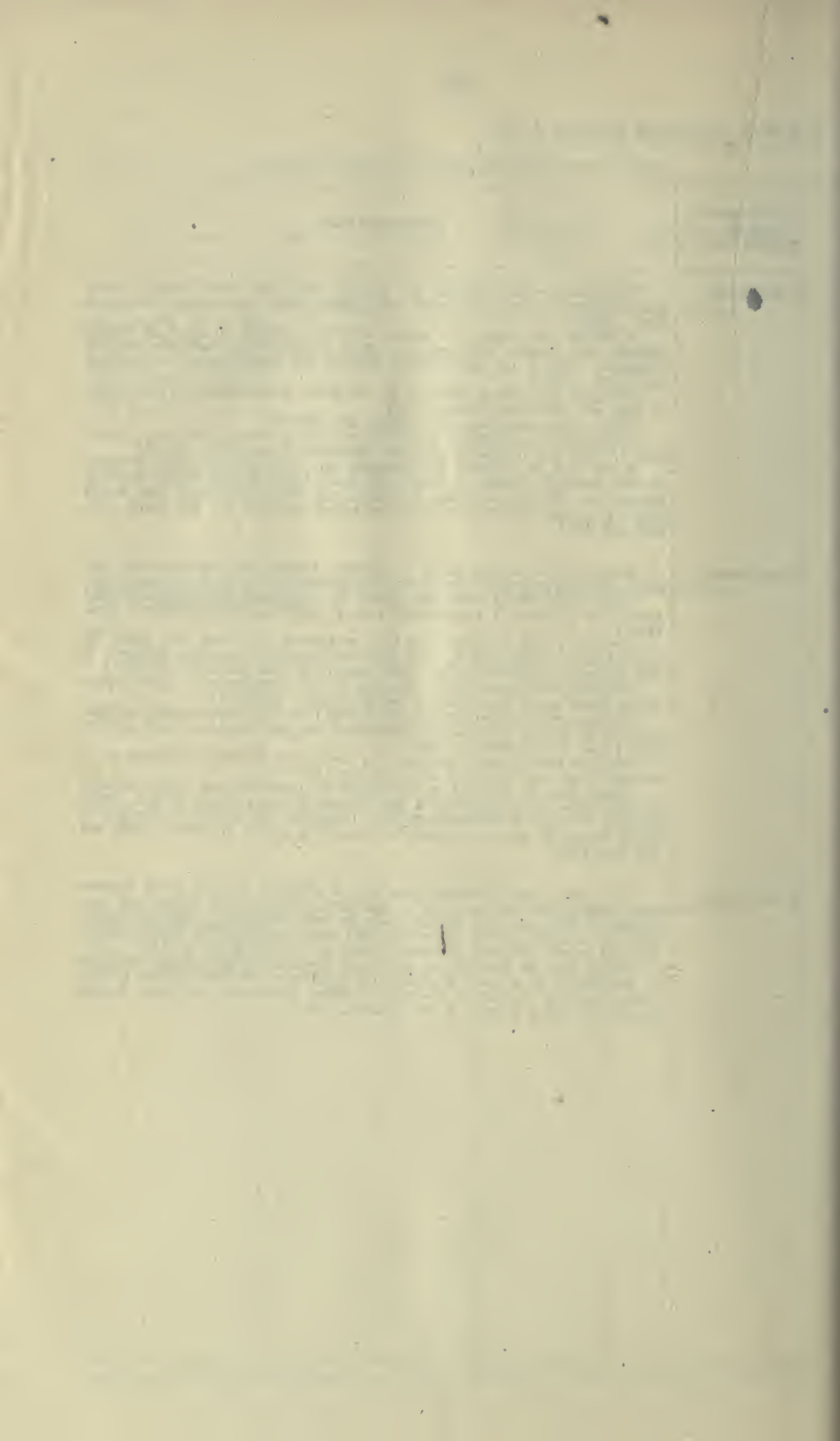
Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
No provisions.	No provisions.	No provisions.
No provisions.	No provisions.	No provisions.
No provisions.	No provisions.	No provisions.

TABULAR DIGEST OF PENSION LAWS
NATURAL CHILD OR CHILDREN OF EMPLOYEES.

Beneficiaries.	Conditions for pension.	Amount of pension per year.	Provisions for discontinuance of pension.
Public school teachers, except those in cities and school districts of more than 65,000 inhabitants where teachers' pension funds were in operation July 1, 1915.	No provisions.	No provisions.	No provisions.
Public school teachers in cities of more than 100,000 inhabitants.	No provisions.	No provisions.	No provisions.
Public school teachers in school districts of not less than 10,000 nor more than 100,000 inhabitants.	No provisions.	No provisions.	No provisions.

IN FORCE IN ILLINOIS JANUARY 1, 1916.

Other depend- ents of employees.	Additional data.
No provisions.	<p>No person while receiving an annuity from any other public school teachers' pension and retirement fund, shall receive an annuity from this fund. [§25a.]</p> <p>If teacher who receives a refund afterward returns to teach in public schools, such teacher shall return to fund, within three years, the amount withdrawn with 4 per cent simple interest for the time such sum was withdrawn. [§27.]</p> <p>All cities and school districts of the State come under the provisions of this act, with exceptions. [§36.]</p> <p>(NOTE.—The exceptions are Chicago and Peoria.)</p> <p>Participation is voluntary as to teachers who were employed on or before July 1, 1915, and obligatory on those employed later. [§§14 and 15.]</p> <p>Funds may be invested in mortgages on unencumbered realty situated in this State of a value of double the loan; bonds of this State, Sanitary District of Chicago, counties, townships and cities of Illinois, and bonds issued by school directors for improving school property. [§9. See Hurd, 1913, §§72 and 195.]</p>
No provisions.	<p>Board of trustees has power to decrease benefits if necessitated by condition of fund, provided, such decrease be in same ratio for all classes. [§155.]</p> <p>Service outside of such city shall be considered in computing time served for purpose of establishing rate of deduction for benefit of fund. [§155.]</p> <p>Teachers not participants who have withdrawn from fund may apply for reinstatement before July 1, 1916, and shall receive same upon payment of full amount of contribution to date, plus 4 per cent interest. [§156(a).]</p> <p>Teachers reemployed on or after July 1, 1916, may apply for participation within three years from date of reemployment. [§156 (a).]</p> <p>Teachers who become participants in this fund may receive credit for past services by paying amount of contribution for the period of said service, plus 4 per cent interest. [§156.]</p> <p>Teachers retired under previous acts have their pensions graduated so as to receive not less than \$320 nor more than \$400.</p> <p>Funds may be invested in mortgages on unencumbered realty situated in this State of a value double the amount of loan; bonds of this State, Sanitary District of Chicago, counties, townships and cities of Illinois, and bonds issued by school directors for improving school property. [§153, see §72, also §195.]</p>
No provisions.	<p>If in any school district there is not sufficient revenue from interest and contributions to maintain a teachers' pension fund under the provisions of this act, such district may, by vote, establish a fund for retirement of teachers over 50 years old, who have taught in the district for at least 25 years. Retiring allowance shall not exceed \$400. [§14.]</p> <p>Funds may be invested in mortgages on unencumbered realty situated in this State, of a value of double the amount of the loan; bonds of this State, Sanitary District of Chicago, counties, townships and cities in this State, and bonds of such school district. [§4.]</p>



REPORT

OF

Illinois
Pension Laws
Commission

PART I. Investigations With Certain Comparative Studies

PART II. Underlying Principles and Specific Recommendations for a Revised Pension Plan

PART II.

REPORT OF THE ILLINOIS PENSION LAWS
COMMISSION.

PART II.

PRINCIPLES AND RECOMMENDATIONS.

Chapter I: Underlying Principles of a Pension Plan.

Chapter II: Outline for a Pension Plan on a Reserve Basis, and
Suggested Provisions for Bringing Existing Public
Pension Funds in Illinois under this Plan.

Chapter III: Proposals for Amendatory Pension Legislation by
the 50th General Assembly of Illinois.

Chapter IV: Recommendation for Further Study of the Pension
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CHAPTER I.

UNDERLYING PRINCIPLES OF A PENSION PLAN.

INTRODUCTION.

The act providing for the Commission requires it to make recommendations, but does not require it to propose a bill for carrying them out. The Commission had nevertheless hoped earlier to propose such a bill for adoption by the 50th General Assembly, but it now seems inadvisable to try to do this. The divergent positions found to exist among different groups of employees interested in existing funds are too marked and the pension problem is too complicated in its various bearings to justify an effort to frame legislation for the general standardization of pension funds until this problem, as it exists in Illinois, has been further studied, with a view to analyzing its various branches and securing reasonable consensus of opinion among those interested as to the general lines of such standardization. The Commission's recommendations correspond with this notion.

This chapter contains accordingly what are believed to be the correct underlying principles for pension practice in Illinois. Chapter II presents a detailed type plan for carrying out these principles, but recommends that before trying to apply this plan generally the pension problem be further investigated. Chapter III offers for immediate adoption certain changes respecting some of the chief pension funds in Illinois, with a view to improving their condition pending the maturing of measures for their more thoroughgoing treatment. Chapter IV lists specific questions which require further consideration.

SCOPE AND URGENCY OF THE PENSION PROBLEM.

The importance of pensions for public employees is evidenced by the length of time during which, and the diverse plans under which, they have heretofore been provided, and by current efforts toward their improvement.

Such pensions existed more than a century ago in parts of Europe, and have been widely extended there and elsewhere during the last generation. They are characteristic of Australasian governments, and are now found in greater or less degree in practically all the states of this country. The general need for a more thorough analysis and logical development of the true principles on which pensions for public employees should be maintained is, at the same time, widely recognized. In 1914 Massachusetts issued a 344-page report on public employees' pensions, with especial reference to the needs of that state; New York City is now completing a report made at a cost around

\$50,000, concerning such pensions, with a view to improving its own pension systems; and a great number of bills, designed to amend and extend the pension plans in Illinois, have appeared in the recent legislatures of this State.

ILLINOIS PENSION SYSTEMS.

The policy of providing pensions for public employees in Illinois began in a limited way in 1852, was materially extended in the 70's, has been much farther extended within the last decade and has resulted in the existence to-day of 15 pension laws, generally compulsory in terms, under which exist 35 separate pension funds, that now include, or, as options are availed of, presumably will shortly include, over 55,000 State and municipal employees. At the same time, according to the estimates of this Commission shown in Chapter VII of Part I, there are still 22,441 municipal and State employees in the State who are beyond the reach even of any of the 35 funds.

The information brought together in Part I of this report shows not only that the various public pension schemes now existing under the laws of Illinois for public employees are inharmonious and often contradictory with reference to each other, but that with perhaps a single minor exception they are financially unsound and moving toward a crisis. It shows the urgent need for the adoption by law of a revised pension plan based on true principles, and for the prompt merging of existing pension systems into that revised plan on terms not too burdensome to the contributing public authorities or to the contributing employees.

UN SOUND CONDITION OF PENSION SYSTEMS IN ILLINOIS.

The general condition of pension systems operating under the laws of Illinois may be correctly described as one of insolvency. That is to say, viewed from the standpoint of sound finance and of having the necessary reserves to carry out the payment of pensions as provided in the laws, there are immense deficiencies in the existing funds. In short, the financial provisions are entirely inadequate for paying the stipulated pensions when due. It may be well to emphasize here that there is nothing more erroneous than the common view that so long as the amount in a pension fund is increasing, all is well with it. To be sure some of these funds are increasing, but that is no indication of their sufficiency, and it is strange how completely satisfying such increase is to many participants even if the fund is certainly inadequate.

The Chicago teachers' pension fund approaches nearer to a condition of solvency than any other of considerable size and experience in this State. In fact, if each teacher in Chicago had contributed ever since entering the service as required of teachers at present, and if the Board of Education had set aside an equal amount, as it does at present, and these amounts had been compounded annually at 4 per cent interest, the Chicago teachers' fund would be solvent. It is not solvent because of liabilities accrued at the time when it began to have its present sources of income. On account of such accrued liabilities there is a deficiency whose present value is over \$5,000,000. More-

over, this deficiency will increase under the present method of operation. The time is at hand, therefore, to put the system on a sound financial basis. Some other funds show a much larger deficiency. The Chicago firemen's fund shows a deficiency having a present value of over \$13,000,000, and the Chicago police fund a deficiency having a present value of over \$30,000,000. These funds, which are the ones for which we are able to make the most reliable calculations, indicate also the general condition of all the principal funds in the State.

This is, moreover, a condition that is sure to grow worse unless prudent and positive measures, involving decided changes, are promptly taken to establish the systems on a secure basis for the future. Furthermore, it will become increasingly difficult as time goes on, to pass from the existing unscientific plans to a scientific "reserve" plan as described later, since with the present provisions for revenue and with the present benefits the deficiencies will increase.

Moreover, the existing pension systems are so different in their provisions, and taken together present such a haphazard condition, that the task of insuring equitable treatment for different classes of employees and of securing sound plans by slightly patching these systems can not be accomplished. To reach a solution of the pension problem our most promising course would seem to be to proceed to develop a pension system in line with definite principles which we conceive to be fundamental to efficiency in the public service and to the welfare of employees.

FEATURES INVOLVED IN A PENSION SYSTEM.

The main matters to be considered in working out such a revised pension system are:

1. The theory of public employee pensions.
2. The question of who should be beneficiaries—whether employees only, or their widows and children also.
3. The length of service and the age required for a pension.
4. The amount of the pension.
5. The method of providing funds for paying pensions—whether the payments should be spread over a long period in advance and accumulated with interest, or be made currently as pensions need to be paid.
6. The ratio in which employer and employee should contribute the requisite funds with which to pay pensions; and
7. The scheme of management.

The principles which should control in regard to these seven items will now be discussed.

1. THEORY OF PUBLIC EMPLOYEE PENSIONS.

A Pension System Benefits the Public Service.

In theory—and it is believed that the theory verifies itself in practice—pensions for public employees are beneficial to the public as an employer. Continuity of service is of great advantage to the employer in most lines of effort. It is especially so in the public service, because of the complex relations of that service and the value to it of that knowledge on the part of employees which come only from their long acquaintance with those relations. Pensions make for such con-

tinuity. Employees are generally required to remain in the service for an extended period of time, usually from twenty to thirty-five years, before they can receive a pension. If an employee voluntarily leaves the service or is discharged for fault before the expiration of that period, he usually forfeits in whole or in part his pension expectancy. The rule for such forfeiture deters employees from leaving their positions voluntarily, and makes them anxious not to give ground for discharge.

Pensions tend also to protect the public service from incompetence through the continuance in that service of an employee after his period of efficiency has passed. The fact that such an employee has the option of retiring and receiving a pension, especially if this is reasonably ample in amount, encourages him to do so, instead of trespassing upon the kind-heartedness of a department head who might shrink from discharging him.

A Pension System Benefits the Employee.

A pension system also inures to the benefit of the employee. It tends toward permanency of employment, and thus affords the employee certain prospects of promotion. Its operation naturally draws attention also to underpaid employees who can not easily make the contributions necessary for pensions, and tends thus to pull up the lower earnings to a minimum sufficient to make such contributions practicable. The chief attraction of a pension system to an employee is, however, that it means a life annuity at the end of service. It means an advantageous investment of his savings to provide for old age. It facilitates his commendable desire to meet his family obligations. It is our common theory that the husband and father should, in his period of economic productivity, provide for the needs of himself and his dependents not only during that period, but for the anticipated later time when his productivity shall have ceased. This result is to be accomplished by thrift—by putting aside, month by month and year by year, and investing in some form of productive capital, which he himself shall own, a certain small fraction of income, in order that this accumulation may suffice for the time of need later. This doctrine of saving against old age and the desire to put it into effect are well nigh universal.

The actual practice of the doctrine, however, in any considerable degree, is far from universal and encounters grave obstacles to-day. We even hear emphatic and bitter denunciation of the whole notion of thrift as a practical matter, on the ground that the income of large classes of people is too small to warrant saving, while favorable opportunities for safe and remunerative investment of small savings are not generally open to employees—nor are these claims groundless. Not only the wage earner, but to a considerable extent the salaried man also, is under a serious handicap to-day in putting thrift into practice. He can not make advantageous investments. In the first place he has ceased to own the tools which he uses, and so hasn't these to dispose of, or to pass on to his son when he can no longer earn. In the second

place, he is very greatly impeded under present conditions in acquiring that primary and most inviting form of investment, a home. The opportunities open to him to procure and pay for a home adapted to his needs and within his means are limited and wholly unsatisfactory, especially in large cities. In the third place, the public employee, as well as the private, is at a decisive disadvantage in seeking to invest his savings safely and productively in the general investment field. The making of paying investments to-day is largely an expert matter, while the employee is not an expert in that line and has neither time nor opportunity to become such. Investments are also made in too large units to meet his case. He may possibly venture into the wretched field of building lot speculation, or petty second-mortgage loans, or alluring get-rich-quick schemes. He is likely in so doing, however, to fare still worse than he would by accepting the meager interest of the postal or some private savings bank, not to mention the risks of the neighborhood type of the latter to which for convenience he naturally turns. A public pension system is designed to meet these prejudicial conditions through the institution of a reasonably remunerative, financially secure and compulsory plan to enable the employee to practice saving during his productive period.

The prevailing opinion, and the only one likely to be adopted for the time being in this State, is that pensions should attach to the relationship between employer and employee, rather than be administered under a general government scheme including all employees. Since, therefore, the public should admittedly be a model employer in all respects, a public pension system for public employees seems desirable.

2. WHO SHOULD BE BENEFICIARIES.

It is our thought that a pension system should be made broad enough to include all public employees on practically permanent tenure who give such long continued service as to amount to what may reasonably be regarded as a life work; that it should include, with appropriate modifications, employees who are injured; and that it should likewise include widows and children. The general practice differs greatly, however, as to these questions, and, of course, the drain upon the pension funds varies greatly according to the inclusiveness of the system. Most systems do provide pensions for injured employees, especially if injured in the performance of duty, but only a minority in this country include widows and children also.

As to the propriety of insuring an income to employees during disability due to injury received in the performance of duty, there should be no question. A question does arise, however, as to whether this should be secured by a pension system, sustained by contributions from both employer and employee, or should be met by the employer under the provision of a workmen's compensation act. The present Workmen's Compensation Act in this State seems to go upon the theory that the charge should fall upon a pension system, since it purports to provide that no public employee can

recover under that act for an injury for which he is entitled to a pension. Reason would seem to demand that this provision be reversed. An injury received by an employee in the performance of duty should properly be charged upon the business, and be met accordingly under the Workmen's Compensation Act. The Commission has felt it to be expedient to provide for a pension to such an injured employee and to his widow and children in case of his death, on the ground that adequate provision is not made under the Workmen's Compensation Act. We are clear, however, that the liability should be met primarily under the Workmen's Compensation Act and that the pension should be reduced by the amount received under that act.

It seems expedient also to make certain limited pension provisions for the employees injured while not in the performance of duty—although this, like the case last considered, involves an extension of the pension principle beyond what is strictly its field, and into the field of accident insurance.

Widows and Children of Deceased Employees.

On the theory that the typical public employee is the head of a family and that the object of a pension is to provide for his needs in old age, and since the family, including children under the age of self-support so far as there are such, is regarded as a unit, it is clearly logical, and it seems to the Commission wise as a matter of social policy, that pensioning arrangements for the typical employee should be made to include his widow and children, in case he should die leaving such. It is recognized that the inclusion of these dependents very greatly increases the amount to be paid in pensions.

The practice of paying pensions to widows and children of certain employees doubtless had its origin in the feeling that provision should be made for families of men who lose their lives in the performance of duty. Our investigations show also that cases of this precise sort do not constitute a sizable financial burden on the pension systems created under the laws of Illinois. These investigations show on the other hand, however, that, under certain systems, widows' pensions have been so extended beyond that class of families, that the total of pensions to be paid the widows exceeds the total of those to be paid to retired employees. Thus, in the case of the Chicago police pension system the pensions being paid to widows at present amount to a little more than those being paid to former employees, and in the ultimate normal state, they will cost about 58 per cent of the total of all pensions. In the case of the Chicago firemen's pension system the amount of a widow's pension is less than under the police system, but still the cost of widows' pensions will in the ultimate normal state exceed somewhat the cost of pensions for retired firemen. When compared with the common practice in cities in other states, the pensions paid per capita in Illinois to widows of policemen and firemen are on an unusually expensive basis. It is very common in other states to keep up the original practice of paying a pension to a widow only when her husband lost his life in the performance

of duty. When pensions are granted instead, as in Chicago, to the widows of policemen and firemen whose deaths are not due to injuries received in the line of duty, it is usual to specify that the pension is not to be greater than a certain amount, which is much less than the amount paid under similar circumstances under the laws of Illinois. As a rule, the amount specified is \$20 or \$25 per month. For employees who lost their lives in the performance of duty, there is no question but that it is in harmony with good public policy to make liberal provisions for their widows and dependent children; but when the full benefits provided for such widows are extended, as they have been in some funds in Illinois, to all widows without regard to the cause of death, and with little or no regard to the length of service rendered by the employee, we are at once making an expensive system and one that does not seem equitable. To illustrate, under police funds, if a husband dies from any cause, after ten years of service, the widow gets a pension of half his salary, except that the pension shall not be less than \$600 nor more than \$900. If he dies before completing ten years of service, the widow gets no pension; but if he dies just after ten years of service, she gets as much in pension per year as, and much more in total amount than, the widow of a man receiving like salary who was long in service. The iniquity of such a provision is obvious. Some change should be made to reduce the burden of widows' pensions on the policemen's and firemen's funds. Certain reasons exist for the payment of pensions to widows on a basis that does not limit such pensions to cases where the employee loses his life from injuries received in the performance of duty, but such extension should be made with due regard to the cost involved, and in such a way as to provide a graduated scale of pensions depending on the accumulations to the credit of the employee.

The children of policemen and firemen in Illinois are pensioned on distinctly different plans at present. For policemen, both parents must be dead, and then the pension to the family of children under age of 16 is the same as it would have been to the widow if living. This entirely disregards the number of children in the family. On the other hand, the firemen's fund pays a certain uniform amount to each child under age 16, while the mother is living, and somewhat more if both parents are dead. The latter plan seems to be the more equitable of the two.

It should be stated that the approval of widows' and children's pensions rests mainly on the desirability of making provision for the family as a unit. Pensions to such dependents do not aid, except perhaps in a very indirect way, in relieving the service of incompetent persons, and therefore one of the main reasons for pensions for employees does not apply to widows' and children's pensions. In short, pensions to dependents after the death of the employee are really in the nature of compulsory life insurance.

3. AGE AND LENGTH OF SERVICE REQUIRED FOR PENSION.

Among the pension systems of Illinois, there are some which prescribe merely a period of service, such as 20 or 25 years, as a requirement for a pension. There are others which prescribe both a

period of service and a minimum age for retirement. Thus, the Illinois State Teachers' Pension and Retirement Fund provides that the person must be at least 50 years old to receive the pension. The situation in this respect is well stated on the last page of Chapter III of Part I, which shows how haphazard are these provisions in regard to age and service, even when the character of the employment is the same.

In foreign countries where pension systems have been long in operation, so far as we have been able to learn there is always a minimum age for retirement specified. The minimum age for public employees is usually fixed at 65, but in some cases at 60, and for women in New Zealand at 55.

It seems clear that some of the greatest abuses of a pension system come from the failure to specify a proper minimum age of retirement. With only a service requirement of 20 or 25 years, a considerable number of men enter upon pension at age under 50, and they are apt to be the most capable men in the service, as such men may accept pension on, say, half salary, and seek employment elsewhere to advantage. The men who accept pensions at ages below 50 live, on the average, so long that they get from the fund much more than their equitable share, and they become the real burdens on the pension system. It is both demoralizing to the public service and inordinately burdensome to a pension system to allow men to retire on pensions in the prime of life.

To carry out the principle that a pension is to provide for the needs of an employee after his period of efficiency has passed, it is necessary to determine upon some average as marking the end of that period. There will, of course, be exceptional cases where individuals are well qualified to continue in their accustomed work beyond that age, and will do so. It is possible, however, to determine upon some age which will approximately mark the end of the reasonably productive period of the average employee, and that should obviously be fixed as the minimum age at which employees should be eligible to receive a pension.

This minimum age for retirement on pension varies to some extent in different services, according to the demands of the service. For example, the agility required of firemen makes it appropriate that they should retire from service earlier than public employees in general. While there is no question in the minds of the Commissioners as to the desirability of prescribing some minimum age for retirement in addition to a period of service, the Commission has encountered difficulty in the selection of proper ages in the different kinds of service; for it is necessary, on the one hand, to select ages that are not so high as to defeat the purposes of a pension system in promoting efficiency; and, on the other hand, ages that are not so low as to lead to retirements on pension at ages when employees should render most valuable service.

4. WHAT SHOULD BE THE AMOUNT OF A PENSION.

The principle to be applied in determining this question is deemed to be this, namely: A pension should be of sufficient amount to pro-

vide in a reasonable manner for the necessary wants of the beneficiary after the age of efficiency has passed. This amount varies to some extent, however, in accordance with the habits of life previously followed. The Commission has found a very strong desire among employees in certain quarters for a pension uniform in amount for all employees concerned, irrespective of their relative remuneration, and for contributions by employees equal in total amount.

It is obvious that difficulties will be encountered in any effort to provide a uniform pension reasonably adequate for all concerned, not burdensome upon the lower paid ranks in respect to the required payments, and available for persons entering service at different ages and remaining for different lengths of time, and to do this on the basis of equal contributions from all. The Commission is strongly of the opinion that a certain minimum pension, adequate for the necessities of existence, should be secured for all beneficiaries. At the same time we deem it reasonable that a pension system should be arranged in recognition, to a certain degree at least, of the inequalities in remuneration and the variations in standards and habits of life which actually exist among public employees. It has seemed desirable, therefore, that a pension plan should provide:

1. For a minimum pension, the same for all beneficiaries who have attained the prescribed length of service and age of retirement. Its amount should be sufficient to meet the necessary wants of the lower paid ranks of the employees concerned; and the necessary funds therefor should be made up by contributions partly from the employer and partly from the employee, but in considerably larger part from the employer than from the employee.

2. For an extra or sur-pension, to be added to the minimum pension for the higher paid employees—up to a certain limit of salary—who have attained the prescribed length of service and age of retirement. Its amount should correspond to the theory that their salaries and habits of life would imply a somewhat larger expenditure in their later years than in the case of recipients of lower pay; and the necessary funds therefor should be made up by contributions partly from the employer and partly from the employee, but in lesser amount from the employer and in greater amount from the employee than in the case of the minimum pension. It is also believed that the discrimination indicated, in favor of the lower paid employee, in the relative amounts paid respectively by the employer and employee for the minimum pension and for the sur-pension—the employer contributing more generously toward the minimum than toward the sur-pension—is on the whole expedient. It should also be added that while a young employee, receiving a very modest salary, would, while that salary continued, have an expectancy of, and be contributing toward, a minimum pension only—the contributions of the employer being much larger than his—yet as his salary rose above the limit for the minimum pension he would then begin to contribute toward, and would come into the expectancy of, an extra or sur-pension, his contributions and expectancy advancing by steps as his salary advanced—up to a certain limit—the employer, however, contributing less generously in proportion than in the case of the minimum pension. The

provision of a minimum pension designed to assure a minimum standard of comfort for public employees generally in their old age is believed to be an appropriate one to be maintained by a governmental authority as a model employer, and one which represents a wholesome social policy.

5. METHOD OF PROVIDING FUNDS FOR PAYING PENSIONS.

There are two recognized methods of providing funds from which pensions are to be paid—the “cash disbursement” plan and the “reserve” plan.

The “Cash Disbursement” Plan.

Under this plan, the outlay for pensions is to be provided currently as payments to pensioners become due. No funds are set aside to accumulate at interest, and the pension burden for present employees is simply unloaded on the succeeding generation with the hope that the authorities at such time will be both disposed and able to pay such pensions on some reasonable basis.

The “Reserve” Plan.

This plan is well described as a “get ready for the future” plan. It involves the setting aside, during the active service, of definite amounts, properly calculated to provide the benefits, and usually expressed as a percentage of the current wages or salary. The amounts so set aside are accumulated at interest and form a reserve fund out of which pension disbursements are made as they fall due. The “reserve” plan recognizes very clearly, and makes it understood by employer and employee, that compensation for service involves, besides current pay, the amount that should be set aside at the time service is rendered to provide a pension for the employee when he becomes inefficient after having satisfied certain conditions. Thus, each generation of taxpayers pays its own obligations for service rendered. Furthermore, the employee’s equity in the scheme is well known at any time on account of the reserves held to his credit.

Unscientific Plans in Illinois.

By an unscientific plan, as the term is here used, we mean one under which certain funds are created without making provision that these funds shall be adequate for the purpose for which they are provided. We shall find it convenient to refer to such plans as “unscientific fund” plans. The pension systems created under the law of Illinois are, for the most part, operating under unscientific fund plans. Such plans have in some cases taken on practically the form of a “cash disbursement” plan. For example, the system for Chicago firemen is operating on practically a “cash disbursement” basis, as there was in this fund on January 1, 1916, only \$3,101, whereas the annual disbursements for pensions to retired firemen and their widows and children will for the year 1916 probably amount to approximately \$370,000. Similarly, the system for Chicago police in service prior to January 1, 1916, is operating practically on a “cash disbursement” basis. For employees entering the police service on or after January 1, 1916, the law provides that the “reserve” plan shall be adopted.

Our investigations reported in Part I show that the character of our pension systems in Illinois could hardly be looked upon as the result of a definite pension policy. On the contrary, these systems seem to have been created without regard to the extended, costly and embarrassing experiments that have been tried. The many experiments that have been carried out in foreign countries and those even now on trial in America, have abundantly demonstrated the consequences of such plans. To continue them is simply to lead into situations that, in general, grow constantly worse, and end in disappointment and failure for many deserving employees who at pensionable age find that funds are not available to pay their pensions. Hence in considering permanent future pension legislation, we should withhold approval from all "unscientific fund" plans.

Advantage of the "Reserve" Plan over the "Cash Disbursement" Plan.

Under the "reserve" plan, the advantage of compound interest over a long period of time is secured, which reduces the apparent cost of pensions to less than one-half the apparent cost under the "cash disbursement" plan. The same amounts may actually be paid in benefits, but the pension cost under the reserve plan requires that a much smaller percentage of the pay roll be set aside currently to provide future pensions than is ultimately necessary under a cash disbursement plan. For example, if the Chicago police system operates on a "cash disbursement" plan in the future, and continues its present provisions in regard to pensions to employees and their widows and children, it will require in the ultimate "normal" state—the time when the system will be carrying its normal load as a going system—that 34.3 per cent as much as the pay roll for wages and salaries be contributed currently for pensions. If, on the other hand, the system were operated on the "reserve" plan, the current annual contributions to be accumulated to pay the same pensions would amount to only 13.8 per cent as much as the pay roll for wages and salaries. Similarly, the system for the Chicago firemen will, in the ultimate "normal" state, require on the cash disbursement plan 36.6 per cent as much for pensions as for salaries.

Our interpretation of these facts is briefly that an item for pensions of approximately 35 per cent of salaries and wages should be regarded as too large an expenditure for pensions, and that we should avoid approaching such a state of affairs by adopting a "reserve" system.

Furthermore, the accumulation of reserves constitutes an important safeguard against the repudiation of pension obligations when the current pension payments become so large in proportion to the pay roll as to constitute a serious burden. While there may be a difference of opinion on the question, it seems highly probable that if the time comes, as it surely will under the plans in operation, when the public treasury must furnish considerably over 30 per cent as much currently for pensions to policemen and firemen and their widows as for salaries, there is very great danger of such

modification as will bring serious hardship. It is certain that the "cash disbursement" plan has nothing to insure the permanence of the system, while scientifically calculated reserves do much to insure permanency. To be sure, changes will no doubt be made from time to time under a "reserve" plan, but they will necessarily be made so as to carry forward to any new system the credits of an employee in the existing system and thus to safeguard his equity in the fund.

Contributions for Pensions are Essentially a Part of Wages and Salaries.

Whether the contribution to a pension fund be taken wholly from the employee's wages or salary, or be paid wholly by the employer, or be derived in part from each, these contributions are in all three cases to be regarded as in reality a deduction from wages or salary. It is the opinion of students of the pension problem that the existence of a pension system in connection with any position or employment is taken into account by both parties to the contract of employment, and that, broadly speaking, wages and salaries actually paid are in due course reduced below what they otherwise would be by the amount of the total contributions from both the employer and employee to a pension fund. The employee will thus pay for his pension by deductions from his wages or salary, whether he is conscious of it or not. Indeed it is quite possible that with a sound fund in existence the reduction in wages and salaries may in time materially exceed the amount of the total contributions, owing to the advantages of such a fund to the employee under present economic conditions. This consideration further emphasizes the advantage to the employer of having such a fund established.

Table to be Used in Computation.

In our actuarial calculations in Part I to determine the probable future cost of pensions, we found, for certain funds that had adequate experience, the rates of mortality, rates of withdrawal from the service by resignation or dismissal and rates of retirement on pensions at various ages, and used these in the prediction of future costs. For the tentative plan which we are proposing, it is clear that the rates of retirement on pensions that have been experienced would not apply, nor do we need for the proposed plans to know the rates of retirement. Neither do we need to know under our proposed plans the rate of withdrawal from the service by resignation or dismissal. We need to know rates of mortality, and in this we are mainly concerned with rates at ages above the minimum ages of retirement from service, although on account of pensions to widows and to certain disabled employees, we have some need for rates at lower ages.

While policemen and firemen show low rates of mortality below age forty, they show, for ages above the minimum ages proposed for retirement from service, rates that are higher than those in the American Experience Table of Mortality.

Similarly, the American Experience Table, from age 55 upward, gives rates of mortality that are lower than those for male teachers who have been on the pension roll in New York City. The rates of

mortality for widows and for female teachers who have been on pension rolls in New York are lower than the rates given in the American Experience Table. Our experience with mortality among Chicago teachers on pensions is too meager to draw a conclusion. When we view the group of employees as a whole, and when we bear in mind that under our tentative plan a certain saving is effected because employees will stay in service beyond the minimum age for retirement, it seems best to compute annuities on the basis of the American Experience Table in illustrating the operation of that plan in Chapter II.

6. RATIO OF EMPLOYERS' CONTRIBUTIONS TO THOSE OF EMPLOYEES.

As set forth in the chapters of Part I dealing with the history of pensions in Europe and in Illinois, practice differs greatly as to the amount of the contributions of the employer in comparison with those of the employee to provide for pensions. At the one extreme are found a considerable number of instances where the employer contributes the whole amount, and at the other extreme a lesser number of cases where the employees contribute the whole amount. Most cases, however, fall between these two extremes, but in these cases the ratio of contributions as between employer and employee varies greatly.

As a general principle, it seems desirable that these contributions should be shared by both employer and employee: first, because this relation is a natural basis for the joint management of the pension system as between the two parties, which is believed to be wise; and, second, because when both parties contribute, each is certain to have a more definite and real sense of what has thus to be diverted from wages or salaries to provide the requisite funds for paying pensions than would be true if only one of the two parties contributed.

As to what should be the ratio which should exist between the contributions of the employer and the employee there is at least a certain superficial propriety in having each contribute equally; and the Commission recommends this ratio not for the minimum but for the additional or sur-pension, specified above for the higher paid employees. Inasmuch, however, as the contribution of the employer is naturally regarded by the employee as more or less in the nature of a bonus, and tends, therefore, to encourage the employee, as a means of securing such bonus, to sustain his own contributions, even though, owing to a low salary, this may at times mean a burden difficult for him to bear, it seems wise to increase this encouragement by providing that in the case of a minimum pension, designed primarily for the lower paid employees, the employer should contribute more than the employee. The principle that a larger contribution should be made by the employer in this case will probably commend itself to the public also on the general ground that it will tend to aid those most in need of aid. Furthermore, the Commission feels that there is special ground for making the employer's contribution rather liberal as a help toward providing, in a revised pension system, for the heavy

liabilities resting upon the existing pension systems, as explained above.

Refunds of Contributions.

When an employee, after contributing to a pension fund for any time, is separated from the public service by resignation, dismissal or death, an equity in the form of a pension expectation exists, and it is unfair not to recognize this fact. If his direct contributions are returned with interest at 4 per cent, he may well regard his contributions as put into a savings institution. And since the employer fails in such cases to get that long continued service which is one of the chief objects for which he contributes to pensions, it seems appropriate that the contributions of employer should revert to the credit of the employer.

It is clear from the experience of the civil service employees of Great Britain that we ought to treat the direct contributions of employees as their savings to be returned when they give up their pension expectations. With a system in which contributions are returned with interest, one of the main objections to substantial direct contributions from employees is removed. Much of the dissatisfaction with contributory civil service pension laws, that have been long enough in operation to test the effect of the service, arises out of the forfeitures that are experienced when such refunds are not made.

7. MANAGEMENT.

With a view to utilizing the special knowledge and interest of the beneficiaries under existing pension systems, and recognizing also that the problems arising in connection with the provision of pensions for one class of employees often differ materially from those for another class, the Commission deems it advisable that the more important existing pension systems which are now under separate management, should continue under separate management. It is likewise felt to be desirable, in accordance with our recommendation that contributions for pensions be made in part by the employer and in part by the employee, that the administration of pension systems should be carried on by representatives of both these parties. We feel it equally desirable too that the administration of the different systems—which we think should, if possible, be reduced very much below their present number of 35—should be unified, not only by having the State Superintendent of Insurance prescribe forms for their records and reports, but also by having the same chairman for each of the important Chicago pension boards, and one or more other members common to these boards. Details of the proposed plan are set forth in the following chapter.

CHAPTER II.

OUTLINE FOR A PENSION PLAN ON A RESERVE BASIS, AND PROVISIONS FOR BRINGING EXISTING PUBLIC PENSION FUNDS IN ILLINOIS UNDER THIS PLAN.

The purpose of this chapter is to set forth the concrete provisions of what might be called a standard pension plan for State and municipal employees, in accordance with the principles presented in the foregoing chapter, and to indicate a feasible method for placing the existing public pension funds in Illinois on that basis.

The figures employed in this chapter which refer to terms of service, age, amounts of pension and amounts or ratios of contributions by employers and employees are used for purposes of illustration rather than as definite recommendations.

The plan includes the following as its main features:

1. Contributions are required from both the employer and the employee, and in amount sufficient to place the pension fund on a reserve basis.

2. All employees who have completed a specified minimum period of service and attained a specified minimum age, receive a specified minimum pension. Toward the cost of this minimum pension the employee contributes one-fourth and the employer three-fourths of the necessary amount. Employees drawing \$1,000 or more in salary receive an additional or sur-pension varying in amount with salary, all salaries above \$2,500 being counted as of that sum. Toward the cost of this sur-pension the employee contributes one-half and the employer one-half.

Employees who have fulfilled only in part the conditions—in respect to contributions, period of service and age for minimum or sur-pension, are protected in their equities.

Employees disabled in the performance of duty receive full pension reduced by the amount of any recovery under the Workmen's Compensation Act. Those disabled otherwise than in the performance of duty receive certain equities.

All employees, or their representatives, receive in pension or refund at least all their contributions, with interest.

Pensions are provided for widows and children, although such pensions need not be included in the standard plan.

3. A scheme is proposed for unified administration of different pension funds.

The method proposed for bringing existing pension funds under the foregoing plan involves the gradual accumulation of a fund to meet the accrued liabilities; by requiring, for a period of years, greater

payments from present employees and from the employer than are required from new entrants under the proposed standard system.

DEFINITIONS.

The following words and phrases shall, unless otherwise stated, have the following meanings in the succeeding provisions:

- (a) A "pension" means an annuity.
- (b) A "service pension" means a life annuity to an employee, beginning at or after the minimum age of retirement.
- (c) A "minimum pension" means a pension of a fixed amount, to which all employees, or all in a specified service, shall be entitled, who have completed the minimum required length of service and attained the minimum age of retirement.
- (d) A "sur-pension" means a pension in addition to a minimum pension.
- (e) "Minimum age of retirement" means the age at which the employee in the particular service shall be entitled to retire and receive a service pension.
- (f) "Disability" means a disability disqualifying an employee for service.
- (g) "Employer" means the state, county, city, town, village, or district from which the employee as such receives salary or wages.
- (h) "Interest" means interest compounded annually, and unless otherwise specified, at the rate of 4 per cent per annum.

SPECIFIC PROVISIONS OF PROPOSED STANDARD PENSION PLAN.

1. EMPLOYEES TO WHOM PLAN SHOULD APPLY.

All State and municipal employees in Illinois, so far as their permanency and the manner of their grouping will allow, shall be included under this pension plan, by appropriate legislation which shall be adjusted to such groupings as is practicable, and which shall involve the further provisions indicated in the sections below.

NOTE.—The permanency required should be that assured to public school teachers under the certificate plan and to other employees on civil service tenure. Employees need also to be so situated that not less than perhaps a minimum number of 500 should be associated in any independent pension plan, any smaller number being insufficient for reliable computations as to future pension cost. It is important to determine what is the best practicable plan of grouping public employees for pension purposes. Two principles need to be kept in mind in this connection. One is that for these purposes there are certain advantages to be derived from associating together under a given pension plan employees whose circumstances of employment are similar. The second is that the larger the number of employees included in a pension system, the greater the economy of administration and the more reliable the actuarial computations which can be made concerning future costs.

A great number of different classifications of public employees for pension purposes is possible. There are in Illinois at the present time three types of such classifications.

One is illustrated by the State teachers' pension fund. This includes under a single pension plan all public school teachers in Illinois other than those in two excepted cities. These teachers are employees in one kind of service, but are scattered in a great number of local political areas of different sizes; yet they are all included under one pension plan.

The second is illustrated by the Chicago policemen's fund. In this case the employees are all in one departmental service and one political area.

The third is illustrated by the Chicago municipal employees' pension fund. In this case the employees are drawn from a variety of departmental services representing almost the entire field of city government, but all belonging to one political area.

No case is made out, or indeed being urged, for changing any of the three illustrative instances mentioned. In view of the fact, however, that of the 35 independent pension funds now existing in Illinois at least 30 include fewer employees than the minimum 500 above mentioned, it is not only desirable but essential, for financial soundness based on actuarial knowledge, to effect combination in some manner among these groups, so that no separate pension system shall fall below this minimum in number of employees. Aside from the 55,000 employees related to the 35 pension funds mentioned, there are also something over 22,000 other employees whose need of pensions is presumably equally great, but who are now beyond the scope of any existing fund. Whether the combination indicated should be secured by grouping under one fund the employees in all services in a given political area, or by grouping all employees in the same service in a great number of political areas, or by some other method, is a question which should be determined after a more extended study of the subject than this Commission has been able to make.

2. CONTRIBUTIONS BY BOTH EMPLOYER AND EMPLOYEE.

Contributions to the pension fund shall be made in part by the employer and in part by the employee.

NOTE.—In some public pension systems the contributions are made entirely by the employer, in others entirely by the employee, but in most they are made partly by the employer and partly by the employee. The Commission regards all these contributions, from whichever party received, as essentially deductions from salary or wages. It is felt accordingly that, in the long run at least, salaries and wages actually paid in a service where a pension system exists will be lower than in a corresponding service where a pension system does not exist, by the amount of the contributions made to the pension system and irrespective of whether the contributions are made by the employer or the employee. At the same time, the plan of having contributions made from both the employer and the employee tends to insure in both parties a greater degree of desirable interest in, and a greater sense of responsibility for, the fund than would otherwise exist.

3. RESERVE PLAN TO BE ADOPTED.

Such contributions shall be held to the credit of the individual employee and shall be sufficient in amount to provide, on the reserve basis, for the payment, when due, of such pension as shall be payable from the fund.

NOTE.—The reserve system proposed implies that the contributions from the salary of each employee, together with the corresponding contributions, hereafter specified, from the employer, shall be held and accumulated with interest to the credit of such employee until the minimum age of retirement, and be then available to be drawn upon for such pension as their amount will at that time provide. This reserve plan involves the keeping of an individual account with each employee.

The reserve plan has not been adopted in most public pension funds, but it has been alleged or supposed by the beneficiaries to be in effect in respect to many such funds. Moreover, it is regarded by the Commission as the only plan by which the financial soundness of a pension fund can be assured and the proper payments for public service be made at the time they are rendered, instead of being left for payment at some later time, with no certainty of their being actually paid at that time.

4. WHO ARE TO RECEIVE PENSIONS.

From this fund pensions shall be payable as follows: To employees from whose salaries deductions for the fund have been made as provided below, and to their widows and children.

When employees have completed 20 years of service and attained the age of 55, or at any time after they have fulfilled these conditions, they shall be entitled to receive from the fund the minimum pension specified below, and any sur-pension for which contributions have been accumulated as provided below.

If an employee who is receiving or entitled to receive such pension or sur-pension, is a male and dies leaving a widow, to whom he was married before he was of age 55, she shall be entitled to receive thereafter the widow's pension specified below.

If an employee, entitled to receive such pension or sur-pension, dies leaving one or more children, each child shall be entitled to receive the child's pension specified below.

NOTE.—This section states the chief requirements for eligibility to pension in the ordinary case, and also names the persons who are to be beneficiaries in that case. As to those requirements, pension practice differs. In the majority of cases, however, two are insisted upon: namely, the completion of a definite and considerable period of service, and the attainment of a specified and more or less advanced age. These two requirements are designed, among other things, to induce continuity of service and to provide definite bases for pension calculations. These basic provisions are adjusted according to the prevailing practice of the service and according to the requirements of the great majority of employees. Not a few exceptional cases, however, must arise where for various reasons the employee is unable to fulfill these requirements, although he has more or less closely approximated that result. The question of how to meet the equities involved in these cases is a problem of no little difficulty, and one which requires careful study of possible graduations and adjustments under this plan. With a requirement, for example, of 20 years' service as a prerequisite for eligibility to pension, the precise provisions which should be made to conserve the equities of persons who have served somewhat lesser periods involve questions of obvious importance, as well as difficulty, and these questions are among those which the Commission has indicated as demanding further study.

Three classes of persons are specified to receive pensions: namely, the employee himself, and also his widow and children. The practice in public pension systems at the present time varies as to the inclusion or the exclusion of widow and children, and this variation to a considerable extent corresponds to different services. Pensions are provided for widows and children quite generally in this country in pension funds for firemen and policemen. They are quite generally lacking in pension funds for teachers and other public employees. It is obvious that, in so far as a pension system is designed to provide for the actual needs of the employee and his dependents after his period of active service, pensions should be provided for widow and children. On the other hand, in so far as a pension system is regarded as designed solely or primarily in the interest of efficiency in the public service, in certain service at last such pensions contribute much less toward that result than do pensions for the employee himself. Such pensions are included in this standard plan to make the plan sufficiently inclusive to cover all cases and also to bring it in line with progressive social policy in general. It is not intended to imply, however, that a pension plan which omitted pensions for widow and children should necessarily be regarded as deficient.

5. AMOUNTS OF PENSIONS.

A minimum pension shall be \$400.00.

A sur-pension shall be such amount as the contributions made therefor, as prescribed below, will provide, when the employee is of age 55.

The widow's pension if she is 5 years younger than her husband shall be two-thirds the amount of the minimum pension and of any sur-pension which her husband is receiving or is entitled to receive at the time of his death. If the widow is older or younger than stated, her pension shall be increased or decreased in amount depending on what can be provided in pension by the then accumulated fund for a widow's pension.

A child's pension shall, if the mother is living, be \$10.00 per month to the age of 18, except that it shall be only \$5.00 per month between the age of 14 and the age of 18, when the child is not attending school; and if the mother is not living, the child's pension shall in all cases above specified be \$5.00 more per month than the amounts stated.

NOTE.—The theory set forth in Chapter I is that, under existing variations in salary, pensions should vary to some extent accordingly, but that a certain minimum amount to provide for security in old age should be insured to all employees included in the pension system.

The minimum of \$400.00 taken for illustrative purposes above has the advantage of being the amount of the pension now provided for in the largest class of public employees; namely, the public school teachers, who comprise nearly half of the total number of State and municipal employees in Illinois. However, the requirement that, for employees receiving a thousand dollars or more, a fund for an additional pension shall be accumulated, but a less percentage of which shall

be contributed by the employer, will make pensions in actual practice vary from the minimum of say \$400.00 to maxima as shown in the illustrative calculations at the end of this chapter.

Under this section funds will be accumulated as if each male employee has a wife five years younger than himself at the time when he reaches 55. Clearly if his wife is relatively older than is indicated by our assumption, a larger pension than two-thirds of the pension for an employee can be provided for her with the funds available; whereas, if she is younger than is indicated by our assumption, less than two-thirds of the pension for an employee is all that can be provided for her with the funds available.

The actuarial difficulties encountered in making, in advance, reliable determinations of the cost of children's pensions, are so great and the amount involved is so comparatively small, that it seems good practice to allow the cost of children's pensions to be borne entirely by the employer.

6. CONTRIBUTIONS.

(a) *For Minimum Pension for Employees.*

From the salary of each employee 35 years of age or less, when this plan is inaugurated, and from the salary of each employee thereafter entering the service at 35 years of age or less, a certain sum shall be deducted by the employer each month and placed in the pension fund. This sum shall be one-fourth of the amount which, with interest, would be necessary to accumulate, in equal monthly amounts, a fund sufficient to provide such employee at age 55 a pension of \$400.00, and if such employee be a male, then sufficient to provide also a widow's minimum pension for a wife counted as five years younger than himself.

The employer shall contribute each month to the pension fund three times the amount so deducted from the employee's salary.

(b) *For Sur-pension for Employee and Widow.*

If the employee is a male and receives \$1,000 or more in salary, all salaries above \$2,500 being counted as of that sum, the employer shall deduct from such salary and place in the pension fund, an additional amount which, added to the deduction from salary already provided for in this section, would equal three per cent of the total salary. The employer shall then contribute an equal additional amount, and these two additional amounts shall be accumulated until the employee is of age 55, to provide at that time such sur-pension for himself and such sur-pension for a widow as the amounts so accumulated will, at that time, provide. If the employee is a female, the two additional amounts mentioned shall be reduced by the amount required for the widow's sur-pension.

NOTE.—The plan (a) above applies only to those employees who are not over 35 years old when, either as present employees or as future entrants, they should come under this pension plan. This limitation corresponds to the requirement in Section 4 above that to be eligible for pension an employee must have completed at least 20 years of service at age 55. It will be understood that the employees intended in (a) above would not include any who were already contributing to some then existing pension fund. The special method recommended for bringing an existing fund into conformity with the standard plan herein presented is dealt with further on.

It is provided above that for the minimum pension—designed especially for the lower paid employees, or as a basis of contribution during such period as they may be lower paid—the employer shall contribute three times as much as the employee. On the other hand, for the employee who receives a higher salary and presumably adopts a corresponding plan of living expenses, an additional or sur-pension is provided, but toward this the employer contributes not three times as much as the employee, but the same amount as the employee; and no salary for the purposes of this sur-pension can be treated as being more than \$2,500. The general consideration of social policy on which these provisions for a minimum pension and a sur-pension rest are set forth in Chapter I, pages 278 and 279.

The three per cent specified will, in the case of employees entering the service at the customary ages and remaining until age 60, yield in minimum and sur-pension a total amount not far from the prevailing standard in several of the im-

portant existing pension funds. If the younger age of retirement is adopted, say 50 or 55, this percentage would need to be raised correspondingly—perhaps to four per cent or five per cent. This phase of the subject is concretely illustrated in the computations shown on pages 295 to 298.

7. EQUITIES PROTECTED.

(a) *Refunds.*

An employee separated from the service, or his representatives, shall at any time be entitled to receive a refund equal to all the deductions theretofore made from his salary, with interest not beyond age 55, less, however, any amounts, with interest not beyond age 55, theretofore received by him in pension for reasons other than disability incurred in the performance of duty. The taking of such refund cancels all rights of the employee or his dependents in the pension fund.

If an employee received such refund before age 55, the contributions toward his pension account theretofore made by the employer, with interest, shall be held to the credit of the employer and applied in reduction of what would otherwise be the employer's contributions in this service the following year.

At age 55, any unmarried male employee still in service or on pension shall be entitled to receive a refund of the amounts of the deductions theretofore made from his salary toward a widow's pension, with interest.

(b) *Retirement after 20 years of service before age 55.*

If an employee retires after 20 years of service, but below the age of 55, he may continue up to that age to pay to the fund monthly an amount equal to the deductions being made from his salary for the pension fund at that time, plus the corresponding contributions required from the employer. He shall then be entitled, at the age of 55, to the same pension rights for himself and his widow, in case there should be such, as if he had continued in the service to that time.

NOTE.—The gist of the first paragraph in this section is that all employees or their representatives shall receive back in pension or in refunds their total contributions, with interest to age 55, if they continue so long in the service.

The provision in (b) above, allowing the employee who has served 20 years, but is not 55 years old, to avail himself of certain conditions not only of deductions from his own salary, but of the contributions made by the employer, increases somewhat the flexibility of the system, and without financial injury to the fund. Additional flexibility could be secured by permitting the employee who has served the required period, but has not attained age 55, or indeed an employee who has served somewhat less than the required period, to retire and receive such pension as the fund then to his credit would purchase. Such permission granted unconditionally would undermine the essential object of a pension system in so far as it is directed to insuring pensions adequate in amount for old age. The advisability of granting such permission, however, subject to certain conditions, is one of the questions which merit further study.

8. PENSION FOR DISABLED EMPLOYEES.

(a) If an employee from whose salary deductions have been made, as provided above, but who has not reached the age of 55, is disabled in the performance of duty, he shall be entitled during such disability, to receive minimum and sur-pensions, as though he had, when such disability was incurred, reached the age of 55. Moreover, his rights in all cases respecting minimum and sur-pension and the equities specified in Section 7 above, and the rights of his wife, if there be a wife, to widow's minimum and sur-pension, shall be the same

as if during such disability, he had continued in the service and deductions had been made from his salary for the pension fund as at the time when such disability was incurred.

(b) If the employee from whose salary deductions have been made, as provided above, is killed in the performance of duty or dies from injuries received in the performance of duty, and leaves a widow, she shall then be entitled to the same minimum and sur-pension as she would have been entitled to, had he died at the age of 55.

(c) If an employee is injured or killed in the performance of duty, or dies from injuries received in the performance of duty, and there results a right to recover under the Workmen's Compensation Act—in this case any amount which he or his widow would otherwise be entitled to receive in pensions, shall be reduced by the amount recovered under that act, lump sum payments thereunder being equitably set off as the capitalized value of corresponding pension rights.

(d) While an employee is receiving a disability pension and up to the age of 55, the employer shall contribute to the pension fund as though deductions were still being made from the employee's salary for that fund; and an amount equal to what such deductions would have been during any year, shall be added the following year, pro rata, to the deductions actually made during that year from all employees' salaries for the pension fund.

(e) The employer shall contribute the full amount of the widow's pension specified in (b) above, up to the date when the husband, had he survived, would have reached the age of 55.

NOTE.—The desire to make provision for cases where an employee is killed or injured during service and especially in the performance of duty—in other words, the desire to provide against hazard of personal injury—has been an important factor in the development of public pension systems. More recently the dominant object has been to provide for old age, and workmen's compensation legislation has come into existence as a method specifically designed to care for employment hazards. The substitution, however, of workmen's compensation for pension is only partly complete, as is shown by the fact that the Illinois Workmen's Compensation Act is designed to provide that recovery under this act shall be reduced by any pension rights which the injured employees may have. This Commission believes in reversing the order of responsibility; hence the provision above for placing the responsibility for injury in the performance of duty with the Workmen's Compensation Act and reducing by the amount of that recovery such pension rights as would otherwise exist. Indeed pensions for disability during service are retained at all only because workmen's compensation legislation at present appears not to provide adequately for the indicated risks in public employment.

In conformity with the principles just stated, it is provided that the full cost of disability pensions should be borne by the employer—pension after age 55 not being regarded as disability pension for this purpose. The provision for charging pro rata to all employees the deductions from the employee's salary which are interrupted by his disability, is based upon the prudential principle of bringing to bear the watchful self interest of fellow employees, as being the best means of preventing abuse by disability pension claimants.

9. PENSIONS FOR EMPLOYEES INJURED OR KILLED, BUT NOT IN THE PERFORMANCE OF DUTY.

If an employee from whose salary deductions have been made for a minimum, or a minimum and a sur-pension, is disabled, but not in the performance of duty, before the age of 55, he shall be entitled to receive during such disability, such pension as the amount accumulated from such deductions and from the employer's contributions would at that time purchase. If the employee be a male, the amount then accumulated toward a widow's pension shall be accumulated at inter-

est until he reaches the age of 55 or dies earlier, at which time it shall go to provide his wife a survivorship pension or his widow a pension, as the case may be.

If such employee dies, whether while in service or on pension, before the age of 55, any refund to which his representatives would otherwise be entitled shall be added to the fund at that time accumulated for his widow's pension, provided that the sum thus added shall not increase that fund beyond what would provide such widow's pension in amount equal to what it would have been had the husband died at age 55.

10. SURPLUS.

Any balance, lapses or other amounts in or falling to, the fund from interest on accumulated funds after age 55, or from delayed acceptance of pensions beyond age 55, or from any other source, shall go to the surplus in the fund to meet (1) cost of administration, (2) any deficiency from failure to realize 4 per cent interest on fund investment, (3) cost due to longevity of annuitants beyond that used in mortality rate calculations; and to avoid default, where necessary, in respect to any other provision above.

11. MANAGEMENT.

(a) Each separate pension fund shall be managed by a board of five trustees, a part of whom shall be appointed by the employer and a part elected by the employees.

(b) Where more pension funds than one exist in respect to the services of a single political area, the chairman of each board of trustees shall be the same and shall be chosen by the employer.

(c) Moneys belonging to such trustees for pension purposes shall in the case of funds respecting services maintained by local authorities, be in the custody of the treasurer of such authority and otherwise in the custody of the Treasurer of the State.

(d) The State Superintendent of Insurance shall prescribe forms for the records and reports of such trustees, with a view to making available necessary information for needed calculations as to pension costs and the adequacy of pension funds; and such trustees shall keep accounts and make reports, as so prescribed.

(e) The State Superintendent of Insurance shall at least once in four years, make an actuarial examination of every such pension fund and report the results thereof to the Legislature.

NOTE.—Each of the 35 existing pension funds in Illinois is as a rule managed by a board of about five trustees. These are usually supposed to represent in their personnel both the employer and the employee. The trustees representing the employee are generally elected by the entire body of employees concerned, while the trustees representing the employer are quite apt to be superior officials in the public service who hold their positions as trustees ex officio, and have no special knowledge or interest respecting this subject, and are frequently changed as a result of political elections.

While the administration of these funds in this manner has on the whole been reasonably capable, it has not met the obvious needs for proper standardization of pension practice. To secure this result a more studious attitude and more sustained attention must be given to the entire field of public pension matters in the State.

With this in view, it is provided above that in any political area having more pension funds than one, the same person shall be chairman of each board of trustees. For example, under this plan, if there were three or four pension funds, say the teachers' pension fund, another in the state charitable institutions, another in the penal and reformatory institutions, and another in the departmental service,

each with a separate board of trustees, the chairman of each board would be the same person. A similar arrangement might exist with respect to the various pension funds in Chicago.

This arrangement would naturally tend toward reducing to a greater degree of uniformity the varied and often contradictory principles now illustrated by those funds, and would still leave the way open for such variation as actual circumstances might make desirable.

The Commission has indeed debated the advisability of having not only the chairman but also two other members of each board chosen by the employer and made common to all the pension funds existing in any single political area, as, for example, in a State or in a local authority. Such an arrangement, however, would involve appointment by the employer of a majority of each board of trustees and would further increase the dominant position of that majority in each board by having the same three appointed for all boards in the given political area. While apparently there should be certain distinct administrative advantages in this arrangement, the Commission has not felt sufficiently clear on the subject to make a precise recommendation on this point, or on the related question as to whether a majority of any given board of trustees should be appointed by the employer or be elected by the employees. The uncertainty of the Commission on this particular is due in some degree to the different results of such election in the case of different pension funds. Those results in certain instances have not been such as to commend themselves highly to the judgment of the Commission. In other cases, however, the personnel chosen by employees has displayed a very marked degree of interest and intelligence respecting the affairs of the pension fund; and the employees, through their committees, have shown much information and a prudent disposition in regard to the pension fund.

As to (d) and (e) above: Reliable actuarial computations of future costs are a prerequisite for sound financial pension practice. Some State agency should therefore be chargeable with the collection from year to year, according to prescribed forms of record and accounting, of necessary data to make such computations and calculations possible for all pension funds, large or small. The impossibility, referred to in Section 1 above, of making such reliable calculations for funds comprising less than say 500 employees, emphasizes the importance of effecting, as there suggested, some combination of the groups of employees who are at the present time included in the numerous small pension funds now existing, or who are contemplating the establishment of such funds in respect to public services in smaller cities in the State. Unless some new State official is provided for this purpose—and this hardly seems necessary at the present moment—it would seem appropriate to impose this duty upon the State Superintendent of Insurance.

BRINGING EXISTING PENSION FUNDS UNDER THE STANDARD PLAN.

In substituting the standard plan shown in the foregoing eleven sections for the regulations governing any existing pension funds, additional provisions would be adopted as follows:

1. The following points shall be determined at the time of such substitution:

(a) The total amount of contributions, with interest, theretofore made for pension from the salary of each employee who entered the service at or under age 35.

(b) The total amount which would at date have been contributed from the salary of such employee, with interest, had the standard plan been in effect from such date of entrance.

(c) The total amount which would at date have been contributed by such employee and by the employer, had the standard plan been in effect from such date of entrance.

2. The difference between (a) and (b) under 1 above shall in the case of each such employee, be spread over his remaining period of service to age 55 in equal monthly deductions from salary, to be paid into the pension fund, in addition to those required under the standard plan, but the total of all such deductions shall not exceed 5 per cent of salary. If any part of such difference shall not have been so paid into the pension fund when the employee reaches age 55, he shall, if he remain thereafter in the service, contribute 5 per cent of salary until such part is so paid.

3. The difference between the amount which is in the pension fund at date and the amount which would have been in that fund at that time if the standard plan had been in effect during the period of service of all such employees, shall, during the next forty years, be paid into the fund by the employer in equal annual installments whose total present value is such difference, provided, however, that each annual installment shall be reduced by the amount paid by the employee, as specified in 2, above.

4. All persons entitled to and receiving pension at date of such substitution shall continue to receive such pension as they are so entitled to receive, save that in the case of any person receiving such pension, as a prior employee, who at that date is not disabled and is under age 55, receipt of further pension shall be suspended until that age. Nor shall any person entitled to and receiving pension at date of such substitution receive, in pension thereafter, more than he would have received in pension had the standard plan been in effect during the period of service of such pensioner or of the employee through whom he claims.

NOTE.—The actuarial figures in Part I show that under present regulations practically all the existing pension funds in Illinois are insolvent, with perhaps one minor exception. That is, in order to meet their specified obligations, incurred in respect to public service rendered, the systems involving the larger numbers of employees, should have at the present time in reserves sums ranging from five to thirty million dollars in addition to what they actually have. The above provisions for placing these funds on a sound basis under the standard plan, broadly speaking, propose to this end two things, namely:

1. An immediate reduction in certain cases of pension obligations, chiefly by allowing pension only to those who have attained a prescribed age and by lowering widow's pensions to generally prevailing standards. In this way a considerable fraction, possibly one-third or more, of the deficit in those funds whose deficits are the largest will be wiped out when the standard plan is adopted.

2. The charging of the balance of this deficit in minor part to present employees and in major part to the employer, such contributions for deficit being in the case of the employee spread over the remainder of his period of service, and in the case of the employer over a future period of 40 years. It has not been practicable to figure what percentage of this deficit would, under these proposals, be met by the employee and what by the employer. Much the larger part, however, would be met by the employer. At the same time, in order to meet this deficit, the employee will increase his contributions from the probable average of about 3 per cent under the standard plan to a rate not above 5 per cent, which the Commission regards as a reasonable maximum of pension contributions by the employee. Furthermore, while the employer and employee both share in the responsibility for the unsoundness of existing pension funds, it seems impracticable to insist upon the employees' assuming more than a relatively small part of the deficiency.

The period of 40 years during which it is proposed that the employer should dispose of the balance of the deficiency is below, rather than above, the number of years adopted for this purpose in some pension adjustment schemes which might be quoted from New York and from foreign cities. It is felt, however, that in accordance with general notions of policy held in respect to similar questions, such obligations ought to be discharged, at least approximately within the generation.

In proposing that, in the case of a person who is already receiving pension and has not attained age 55, pension shall be suspended until that age is reached, it is recognized that such pensioner might have a color of legal claim against such suspension. In view, however, of the prevailing insolvency of the pension funds and of the fact that a pensioner would in any case be limited to the right to share *pro rata*—that is, along with all other claimants—in a pension fund really insolvent any actual legal remedy against such suspension would perhaps be of very doubtful availability. Furthermore, if any group is getting something for nothing, it is those who became pensioners before their fellow employees awakened to the actual cost of pensions and to their effect upon salaries. It would seem clearly inequitable that one able-bodied employee should be required to remain in the service until age 55 and make increased pension contributions under the standard plan before becoming entitled to pension, while another able-bodied employee should be allowed to receive pension before that age without even making contributions at all for certain years prior to that date.

ACTUARIAL COMPUTATIONS SHOWING THE RESULTS TO BE EXPECTED UNDER PROPOSED STANDARD PENSION PLAN.

Under a reserve pension plan such as the Commission recommends, there will be on hand to the credit of each employee when he or she reaches the minimum age for retirement an amount sufficient to guarantee the pensions promised according to an assumed table of mortality and rate of interest. This involves the accumulation of funds while the employee is in active service to pay the pensions promised upon the termination of such service.

The Commission recommends that there be accumulated to the credit of each male employee, sufficient funds not only to provide a pension for himself but a survivorship pension for a widow, the idea being that when he reaches the age for retirement, if he has a wife, the amount accumulated to provide a survivorship pension for a widow will be set aside for that purpose and that if he has no wife, the amount thus accumulated will be refunded to him. The Commission recommends that funds for widows' pensions be accumulated on the supposition that each male employee has a wife five years younger than he and that when the employee reaches the age for retirement, if he has a wife, the amount thus accumulated will be used to provide a widows' pension based on the actual ages of the employee and his wife. In the tables that follow, it is assumed in all cases that the wife is five years younger than the husband.

The standard plan recommended involves refunds of all contributions made by the employee with 4 per cent interest per annum to the date when the minimum age for retirement is reached, less the amounts paid in pension to such employee and any dependents. In the tables that follow, the refunds are calculated according to this plan.

All calculations are made on the basis of the American Experience Table of Mortality with 4 per cent compound interest. For the information of any actuary who may wish to check these figures it may be stated further that the calculations involving more than one life were made on this table "Makehamized."

TABLE CXXIV.

In Table CXXIV below, are given the amounts necessary to provide a pension or pensions at the several ages of retirement stated therein, on the following bases:

1. If the employee is a female, or a male who is unmarried on the date when the minimum age for retirement is reached, a pension of \$400 per year.

2. If the employee is a male who is married on the date when the minimum age for retirement is reached, a pension of \$400 per year for him during his life and a pension of two-thirds this amount for his widow.

The cost of the refund privilege in this table is the cost of insuring to the estate of the employee, return of one-quarter of the amount necessary to provide the above pension or pensions, less the amounts actually paid in pensions.

TABLE CXXIV.

Age of employee on date of retirement.	If employee is a female or unmarried male.			If employee is a married male.		
	Amount necessary to provide pension, if no refund.	Cost of refund privilege.	Total amount to provide pension with refund privilege.	Amount necessary to provide pension, if no refund.	Cost of refund privilege.	Total amount necessary to provide pension with refund privilege.
50.....	\$5,324 80	\$28 40	\$5,353 20	\$6,250 40	\$1 60	\$6,252 00
55.....	4,704 00	31 20	4,735 20	5,644 80	2 00	5,646 80
60.....	4,040 40	32 40	4,072 80	4,977 20	2 40	4,979 60
65.....	3,361 60	33 30	3,394 90	4,271 20	2 80	4,274 00

TABLE CXXV.

Under the standard plan, all employees upon reaching the minimum age for retirement shall have contributed the same amounts reckoning interest, towards pensions of \$400 per year for themselves, and in the cases of male employees, the same amounts, reckoning interest for widows' pensions. If the accumulations are to be made by equal amounts each year throughout the period of service to the date when the minimum age for retirement is reached, the annual payments will necessarily vary according to the ages of entrance into service. Table CXXV shows the annual cost to provide for one-quarter of the above pensions, with refunds.

TABLE CXXV.

Age of employee on entrance into service.	Annual cost to employee when no widows' pensions are to be provided for.				Annual cost to employee when widows' pensions are to be provided for.			
	Age at retirement.				Age at retirement.			
	50	55	60	65	50	55	60	65
21.....	\$24 13	\$16 25	\$10 84	\$ 7 12	\$27 77	\$19 02	\$12 97	\$ 8 72
25.....	30 70	20 24	13 31	8 64	35 31	23 69	15 92	10 59
30.....	42 93	27 25	17 48	11 15	49 59	31 91	20 90	13 67
35.....		38 12	23 54	14 65		44 62	28 15	17 95
40.....			32 92	19 73			39 36	24 17
45.....				27 59				33 80

TABLE CXXVI.

Table CXXVI shows the annual cost to the employer to provide for the remaining three-quarters of the pension whose cost to the employee is stated in Table CXXV. The figures in this table are approximately three times as large as the corresponding ones in Table CXXV, but are not exactly so because of the absence of refunds to the employer if the employee dies before the amount accumulated from his contributions is returned in pension.

TABLE CXXVI.

Age of employee on entrance into service.	Annual cost to employer when no widows' pensions are to be provided for.				Annual cost to employer when widows' pensions are to be provided for.			
	Age of retirement.				Age of retirement.			
	50	55	60	65	50	55	60	65
21.....	\$ 70 89	\$ 47 48	\$31 51	\$20 54	\$ 83 22	\$ 56 98	\$ 38 82	\$ 26 09
25.....	90 16	59 14	38 68	24 95	105 83	70 97	47 65	31 69
30.....	126 10	79 65	50 80	32 19	148 01	95 58	62 58	40 89
35.....		111 39	68 42	42 27		133 67	84 27	53 73
40.....			95 68	56 92			117 86	72 32
45.....				79 61				101 14

TABLE CXXVII.

Table CXXVII contains the totals of Table CXXV and CXXVI and thus exhibits the total cost per year for a pension of \$400 per year to the employee and in the case of a male employee of two-thirds this amount to his widow, with refund of one-quarter the amount thus accumulated, as already explained.

TABLE CXXVII.

Age of employee on entrance into service.	Total annual cost when no widows' pensions are to be provided for.				Total annual cost when widows' pensions are to be provided for.			
	Age of retirement.				Age of retirement.			
	50	55	60	65	50	55	60	65
21.....	\$ 95 02	\$ 63 73	\$ 42 32	\$ 27 66	\$110 99	\$ 76 00	\$ 51 79	\$ 34 81
25.....	120 86	79 38	51 99	33 59	141 14	94 66	63 57	42 28
30.....	169 03	106 90	68 28	43 34	197 40	127 49	83 48	54 56
35.....		149 51	91 96	56 92		178 29	112 42	71 68
40.....			128 60	76 65			157 22	96 49
45.....				107 20				134 94

TABLE CXXVIII.

Under the standard plan a deduction is to be made from the salary of each male employee in receipt of a salary of \$1,000 per year, or over, of a fixed percentage of the salary, this percentage to depend upon the minimum age for retirement adopted by the particular service in which the employee is engaged. The amounts thus deducted less the amounts required to provide for these pensions, the cost of which is illustrated in the four tables above, together with contributions of equal amounts from the employees are to be improved at 4 per cent interest per annum, compounded annually to the date when the minimum age for retirement is reached and used to provide an extra or sur-pension for the employee, also a survivorship widow's pension for his wife, if he has a wife on that date.

Table CXXVIII shows the amount of pension including both minimum and sur-pensions which would be available to a male employee or his widow under the proposed plan if he entered the service at the age of 25 and receive in salary the amounts stated in one of the salary schedules given below, the minimum ages for retirement being as stated in the table. The percentage of salary deducted is 5 per cent when the

minimum age for retirement is 50; 4 per cent when 55, and 3 per cent when 60 or 65.

Schedule I. \$900 first year, \$1,000 second year, \$1,350 thereafter.

Schedule II. \$675 first year, increasing by \$50 per year until it reaches \$1,125, then \$1,235 for next succeeding year and \$1,355 thereafter.

Schedule III. \$840 first year, \$960 second year, \$1,080 third and fourth years, and \$1,200 thereafter.

Schedule IV. \$1,000 first year, increasing by \$100 per year until it reaches \$1,800, then remaining at this figure thereafter.

Schedule V. \$1,000 at outset, increasing by \$300 after each period of service of three years until it reaches \$2,500, remaining at this figure thereafter.

TABLE CXXVIII.

Salary as in	Age of retirement.							
	¹ 50		² 55		³ 60		³ 65	
	Em- ployee's pension.	Widow's pension.	Em- ployee's pension.	Widow's pension.	Em- ployee's pension.	Widow's pension.	Em- ployee's pension.	Widow's pension.
Schedule I.....	\$566	\$377	\$635	\$423	\$678	\$452	\$ 911	\$607
Schedule II.....	501	334	555	370	597	398	776	517
Schedule III.....	519	346	578	385	623	415	828	552
Schedule IV.....	652	435	746	497	815	543	1,128	752
Schedule V.....	713	475	834	556	925	617	1,307	871

¹ 5% deduction from salary.

² 4% deduction from salary.

³ 3% deduction from salary.

TABLE CXXIX.

The standard plan provides for deduction from salaries of female employees equal to the deduction from salaries of male employees, less the amounts necessary to provide for widows' pensions. This gives the following percentages to be deducted from salaries of female employees in the cases where the salary schedules are as in Table CXXVIII.

TABLE CXXIX.

Salary as in	Age of retirement.			
	50	55	60	65
	Per cent.	Per cent.	Per cent.	Per cent.
Schedule I.....	4.33	3.39	2.44	2.50
Schedule II.....	4.33	3.39	2.48	2.41
Schedule III.....	4.31	3.39	2.49	2.46
Schedule IV.....	4.32	3.36	2.46	2.40
Schedule V.....	4.28	3.36	2.46	2.40

CHAPTER III.

PROPOSALS FOR AMENDATORY PENSION LEGISLATION BY THE 50th GENERAL ASSEMBLY OF ILLINOIS.

The Commission believes that, without prejudice to the more thorough treatment of all public pension funds in this State which is recommended in Chapter II, and with a view to improving the conditions in the meantime of some of the larger pension funds which urgently need attention, certain changes of a temporary character should be made toward such improvement. The Commission recommends, therefore, that the laws affecting the following four public pension funds; namely the Chicago Teachers' Pension Fund, the Pension Fund of Municipal Employees of Chicago, the Chicago Policemen's Pension Fund and the Chicago Firemen's Pension Fund,—be amended by the Fiftieth General Assembly so as to include the provisions specified below.¹ Also, that the Workmen's Compensation Act be amended as specified below.

PROPOSALS AFFECTING EACH OF THE FOUR FUNDS.

1. The minimum age at which an employee may withdraw from service and enter on pension, except in cases of disability, shall be as follows: Policemen, firemen, and teachers, 50 years; municipal employees, 55 years.

2. Each disability pensioner shall be examined at least once a year by one or more physicians selected by the managing board of trustees; such physician, or physicians, shall advise the pension board whether disability of the employee continues; and if disability no longer continues, the employee shall return to the service at the former status of such employee.

3. Illegal voting at any election of pension trustees shall be punishable by a fine of \$100.

4. The State Superintendent of Insurance shall prescribe a system of records and accounting to be observed in the management of each pension fund in the State, with a view to making available the information necessary for the proper administration and public regulation of these funds, and in particular shall prescribe a form for reports to be made to him at least once a year by the trustees of each such fund; and such trustees shall make such reports. The State Superintendent of Insurance shall report each year to the Governor this information, or such summary thereof as he may deem wise.

¹In its recommendations for pension contributions from the city, the Commission has not proposed any definite period during which such contributions should continue. It is our opinion that they should continue until the adoption of a revised pension plan as contemplated in this report.

5. An emergency clause shall be affixed to each bill, so that the amendments will take effect upon their passage.

6. The Illinois Workmen's Compensation Act shall be amended so that when a State or municipal employee, who is included under a pension fund to which his or her employer contributes, is injured or dies in the performance of duty, the pension rights of such person or his or her dependents shall be reduced by any amount received by such person or dependents in the form of compensation under the provisions of the Workmen's Compensation Act.

PROPOSALS AFFECTING CHICAGO TEACHERS' PENSION FUND.

1. Teachers now in service or hereafter appointed shall, during the first four years they are in service, contribute \$15 per year to the pension fund; during the second four years, \$25; during the third four years, \$30; and thereafter as long as they are in the service, \$40 per year—the board of education contributing twice the amounts thus contributed by the teachers.

2. A teacher who has served 25 years and is at least 50 years old may, on retirement, receive pension. A teacher retiring after 25 years of service, and before age 50, may continue payments as though in service, and receive pension at the age of 50.

3. The period of service required, in order that a teacher may be eligible for the disability pension provided for in the present law, shall be 12 years.

4. The amount of disability pension shall be in no case less than \$200 per year.

5. The day for election of pension trustees shall be Friday instead of Wednesday as under the present act.

6. The second (or final) election shall be eliminated in the case of any candidate for pension trustee who receives a majority of all the votes cast at the primary election for the office for which such person is a candidate.

7. The investment of surplus funds shall be mandatory on the board of trustees, and all interest earned by the pension fund shall revert to the fund.

8. The board of trustees shall have power to suspend payment of disability pensions if disability ceases.

9. The pension fund accounts shall be audited at least once a year.

10. Teachers coming into the Chicago public schools with outside time to their credit shall be required to make back payments for such outside time, with interest at 4 per cent per annum, compounded annually.

11. Contributors no longer in service shall be entitled to hold office the same as contributors in service.

12. Disability must be shown to have been the cause of the teacher's termination of service in order to obtain a disability pension.

NOTE.—Omit emergency clause proposed above.

PROPOSALS AFFECTING PENSION FUND OF MUNICIPAL EMPLOYEES OF CHICAGO.

1. Employees now in the service, or hereafter appointed, shall contribute \$30 per year toward the pension fund as long as they are in the

service, and the city shall contribute twice the amounts thus contributed by the employees.

2. Section 7 of the present act shall be amended to allow 4 years instead of 3 in which to make up the difference between the amount paid in and that required to be paid before a full pension may be received.

3. Section 8 of the present act shall be amended to allow an employee 12 months instead of 30 days, as in the present act, in which to make up the difference between the amount paid in and that required to be paid in where the employee leaves the service after 20 years of service but before the age of 55 and expects to receive pension at the age of 55, with the provision that 5 per cent interest will be charged from date of retirement from service to date when such entire amount is paid.

PROPOSALS AFFECTING CHICAGO POLICEMEN'S PENSION FUND.

1. Section 9 of the Police Pension Act shall be amended by substituting "the superintendent of insurance" for "one or more actuaries"

2. Employees shall contribute to the pension fund $2\frac{1}{2}$ per cent of their salaries, and the city shall contribute the proceeds of a tax levy of nine-tenths of a mill on each dollar of taxable property in the city.

3. Upon the death of an employee, not due to the performance of duty, before the age of 50, the widow shall receive monthly a pension of \$2 for each year of service performed by her deceased husband, but not to exceed a total of \$40 per month.

The widow of an employee killed in the performance of duty or of one, who in the performance of duty, received injuries from which he afterwards died, or of an employee who has served at least 20 years or was retired on pension after age 50, shall receive a pension of \$40 per month.

4. If an employee dies leaving one or more children each child shall receive a pension of \$10 per month while the mother is living and \$15 per month when neither parent is living; up to the age of 14, and shall thereafter receive like amounts up to the age of 18 so long as attending school, and when not attending school, then \$5 less per month.

5. An employee retiring from service after 20 years of service and before 50 years of age may continue until that age to contribute to the pension fund twice the amount which such employee was contributing at the time of retirement, and receive pension at the age of 50—the widow and children, if there be such, to have the same pension rights as if the employee had remained in service up to that age.

6. The wives and children of insane policemen shall be granted the same pension privileges as widows and children of policemen who die in service not from injuries received in the performance of duty.

PROPOSALS AFFECTING CHICAGO FIREMEN'S PENSION FUND.

1. Employees shall contribute to the pension fund $2\frac{1}{2}$ per cent of their salaries, and the city shall contribute the proceeds of a tax levy of five-tenths of a mill on each dollar of taxable property in the city.

2. If an employee dies hereafter leaving a widow, she shall receive a pension of \$40 per month.

3. If an employee dies leaving one or more children, each child shall receive a pension of \$10 per month while the mother is living and \$15 per month when neither parent is living, up to the age of 14, and shall thereafter receive like amounts up to the age of 18 so long as attending school, and when not attending school, then \$5 less per month.

4. An employee retiring from service after 20 years of service and before age 50 may continue until that age to contribute to the pension fund twice the amount which such employee was contributing at the time of retirement, and receive pension at the age of 50—the widow and children, if there be such, to have the same pension rights as if the employee had remained in service up to that age.

TABLE SHOWING APPROXIMATE RESULTS FOR TYPICAL EMPLOYEES OF ABOVE PROVISIONS, IF ADOPTED.

Funds.	Yearly contributions to be made by employees.	Percentage of salary.	Mills to be contributed by city.	Approximate ratio of city's to employee's contribution.	Average yearly pension.	Widow's yearly pension.	Minimum age for retirement.
Policemen.....	\$33 00*	2½	15	*6 to 1	*\$690	†\$480	50
Firemen.....	34 28*	2½	15	*6.6 to 1	*700	†480	50
Municipal employees.....	30 00	2½	100*	*2 to 1	600	.....	55
Teachers	15 00 first 4 years.	2½	16*	*2 to 1	†400	.....	50
	25 00 second 4 years.	.....	.....	.....	.....	.....	.....
	30 00 third 4 years.	.....	.....	.....	.....	.....	.....
	40 00 thereafter.	.....	.....	.....	.....	.....	.....

* Approximately.

† Pension since 1913.

‡ Proposed pension.

CHAPTER IV.

RECOMMENDATION FOR FURTHER STUDY OF THE PENSION PROBLEM IN ILLINOIS.

As stated above, the provisions recommended in Chapter III for adoption by the present Legislature will accomplish only in minor part the changes which are desirable in the pension laws of Illinois. In regard to many fundamental questions involved in this complex subject, the Commission, as explained in Chapter I, has been unable, in the limited time available, to reach conclusions. Difficulties arise from the fact that many independent pension funds exist which include groups of employees too few in number to make reliable actuarial computations possible. Difficulties are met in endeavoring to adjust the amounts of pensions to employees whose services differ widely in character, and in endeavoring to fix the proper ratio of contribution as between employer and employee. Difficulties beset the effort to build a pension system financially sound—possessing at all times resources to meet its then obligations. Still greater difficulties are encountered in the attempt to place on a sound basis pension systems already in existence which have been operating on an unsound basis until they are burdened with an almost crushing load of liabilities for which no resources exist. Problems of administration likewise await solution.

All these questions are rendered still more formidable by the diversity of pension legislation and practice in this State, and by the conspicuous lack of any consensus of opinion between different groups of employees as to sound pension policies.

The following are some of the important questions to which further study should be devoted, with a view to incorporating in appropriate legislation the results of the study:

1. What should be the minimum age at which an employee should be eligible to receive pension?
2. What number of years in service should be required before an employee is entitled to receive pension?
3. What provision should be made for an employee entering service too late in life to allow him to complete the period of years specified in 2 before reaching the minimum age specified in 1.
4. To what extent should the tentative proposals on pages 293 and 294 of Chapter II be adopted in bringing existing pension funds under the proposed standard plan?
5. What plan should be adopted to insure that no separate pension fund should include too small a number of employees to make reliable actuarial computations concerning their pension experience possible?
6. What method, if any, should be adopted for combining for pension purposes employees from different services in the same polit-

ical area, or employees from the same, or from different, services in separate political areas?

7. Are the ratios of contribution as between employer and employee which are specified in section 6 of Chapter II the best for practical use? If not, what ratios should be adopted?

8. Should the practice of providing that the contributions of the employer shall be made from special sources of public revenue be abandoned?

9. Is it desirable that the same, or approximately the same, plan be applied in the case of all pension funds, or in the case of certain groups of such funds?

10. Should the majority of each board of pension trustees be appointed by the employer, or should they be elected by the employees?

11. Should any of such trustees be members of more than one board of pension trustees?

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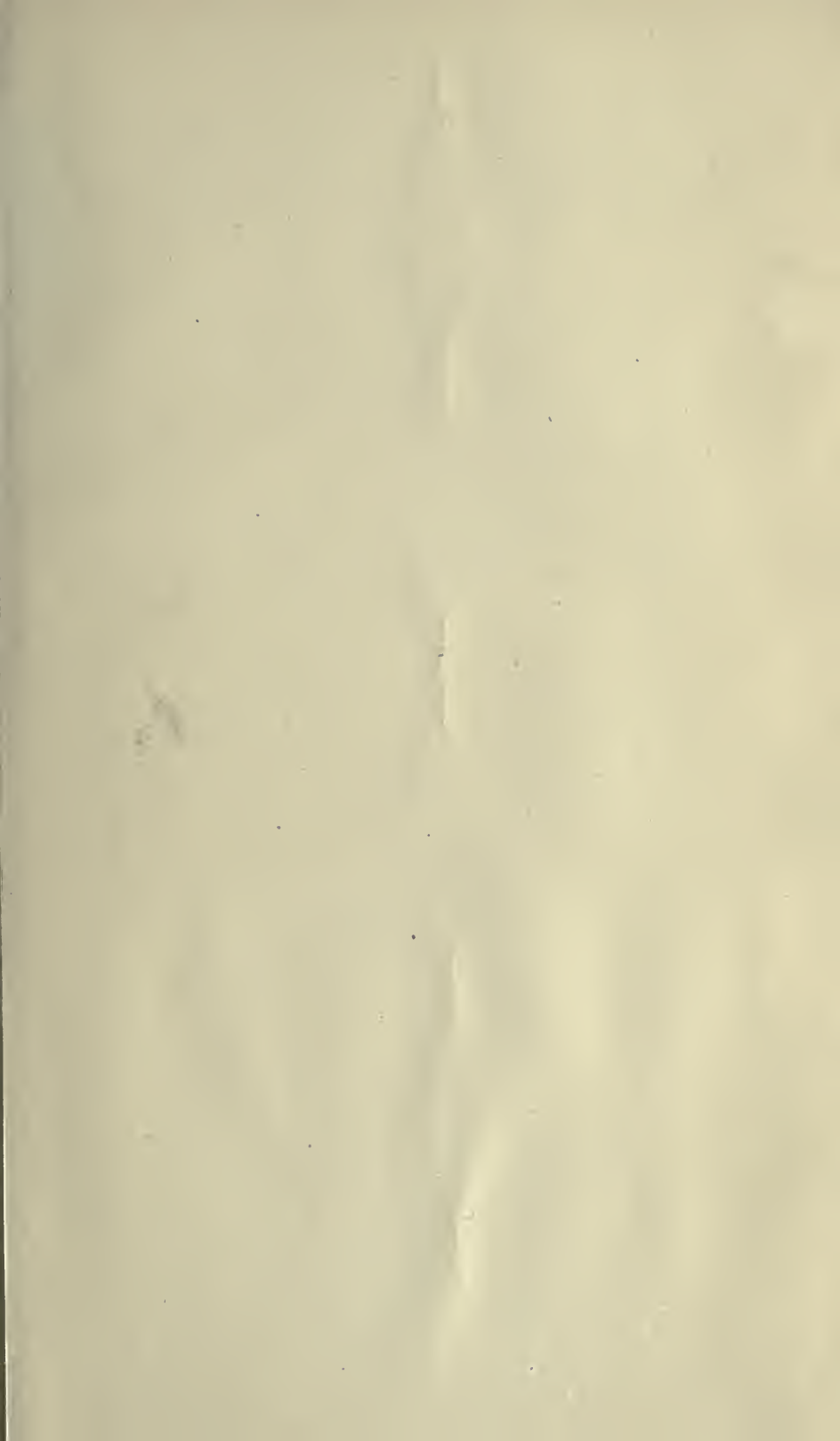
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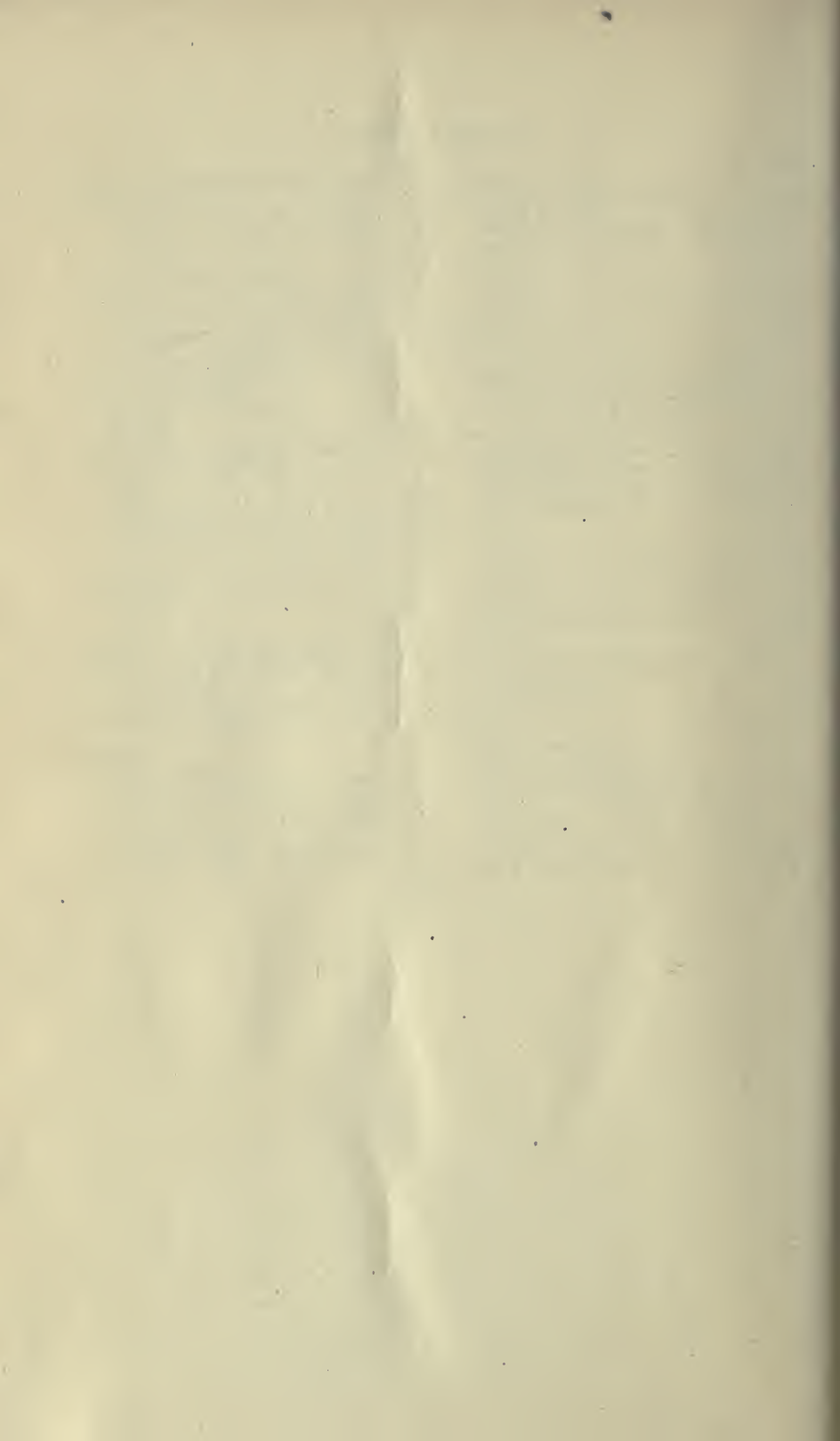
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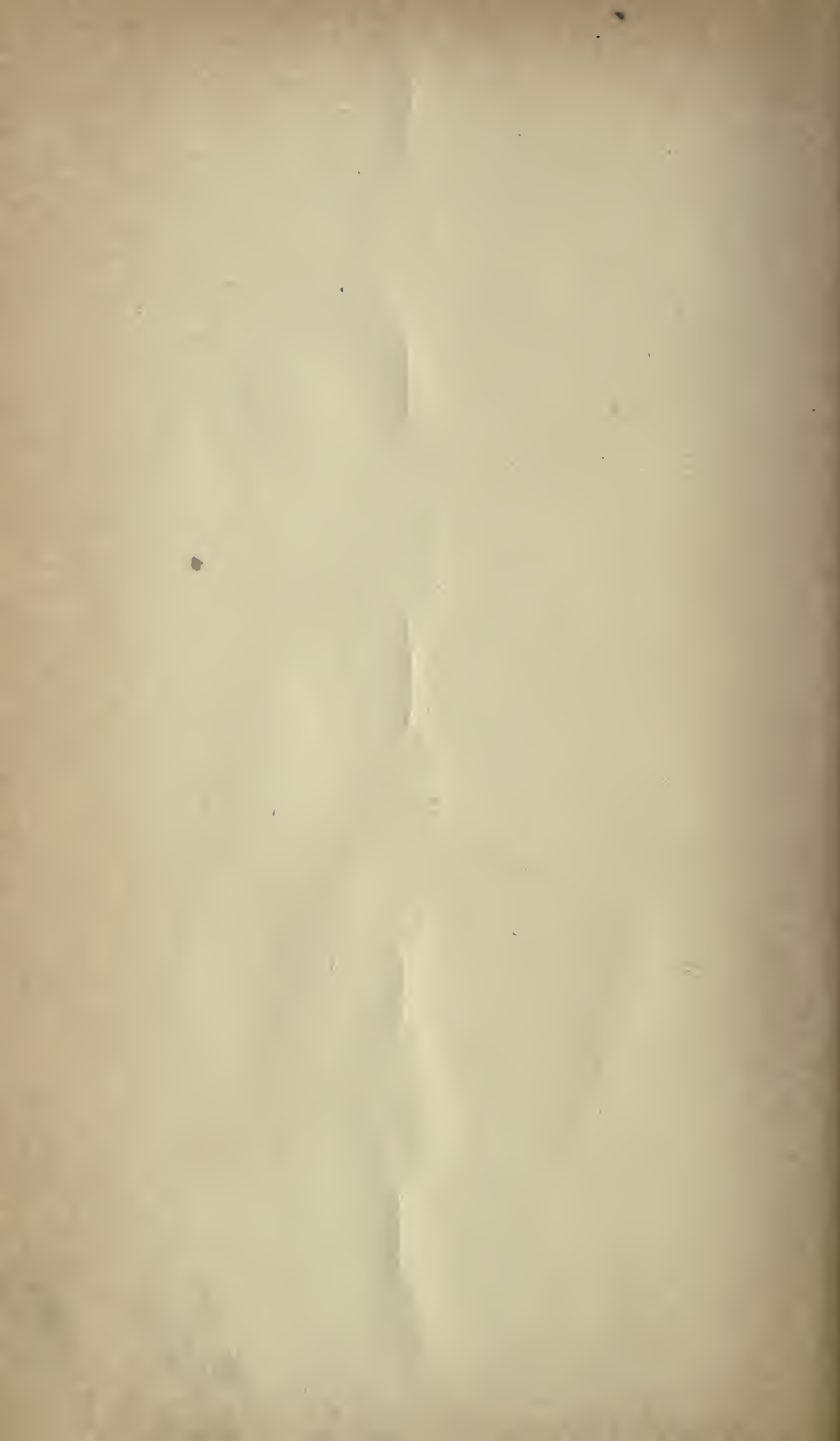
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